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Casual explanations of interpersonal behaviour given by socially withdrawn children.

Helen Klein
University of Windsor

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CAUSAL EXPLANATIONS OF INTERPERSONAL BEHAVIOUR GIVEN BY SOCIALLY WITHDRAWN CHILDREN

by

Helen Klein

A Thesis
Submitted to the Faculty of Graduate Studies
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ABSTRACT

The purpose of this study was to explore the manner in which withdrawn children interpret social interactions. Withdrawn children were compared to normal children in order to investigate whether these two groups could be distinguished on the basis of their explanations of social behaviour. Each child was administered a series of written vignettes depicting a social interaction between two peers and were required to explain why one of the story characters behaved in the manner described.

An important aspect of the study was that certain cues within the vignettes were manipulated. In some of the stories the main character was presented as a friend, whereas in other stories, the main character was presented as a classmate. This manipulation was performed to explore whether withdrawn and normal children are sensitive to the role of friend and whether they alter their explanations accordingly. Also, in some stories depicted a positive social interaction, whereas other stories depicted a negative social interaction. This manipulation was performed to explore whether withdrawn and normal children are sensitive to positive and negative social interactions and whether they alter their explanations accordingly.

The children's explanations were coded for the type of explanation category used and for the affective quality of the explanation. In order to distinguish between normal and withdrawn children, several discriminant analyses were performed.

The results of the study were as follows. Withdrawn girls could be significantly distinguished from normal girls on the basis of type of explanatory category used. The same distinguishing pattern appeared in response to most of the story types. No clear-cut effects of one cues holding the other cue constant was noted on the basis of explanatory category used. The same pattern of explanations appeared in response to most of the story types. No clearcut effects of particular cue were noted. Therefore, although the cues were effective in eliciting responses which could discriminate between the two groups, the differential effect of each cue appeared to be slight.

Withdrawn boys could be significantly distinguished from normal boys on the basis of their explanations. However, most of the distinction between these two groups was due to their responses to only one of the stories. Therefore, only certain cues appeared to be effective in eliciting responses which could discriminate between the two groups. Withdrawn boys could not be distinguished from normal boys by the use of their affective tone.

Certain sex differences between normal girls and normal boys were also noted. Normal girls could be significantly discriminated from normal boys on the basis of the type of explanation category used, and on the type of affective tone used.

The developmental implications of the results were discussed.

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CHAPTER I

INTRODUCTION

Overview

Within most classrooms there are one or two children that are friendless and ignored by the rest of their classmates. These children may be labelled as shy, timid or withdrawn. Until recently, the behaviour of such children received little attention by clinical and school psychologists for these children are usually not disruptive, nor do they cause disturbances in the classroom. Instead, psychologists have focused on the aggressive, acting out children whose deviant behaviour was more apparent and of more of an immediate concern to the teacher.

The problems of the withdrawn children have been neglected even though it is known that such behaviour may be associated with sociopathic and psychopathological behaviour. Research has dealt mainly with the identification of such children and the modification of their behaviour. Since there is some evidence that psychopathological disturbances may affect or be associated with disturbances in social cognition, it seems important to examine how withdrawn children conceptualize the motives and behaviour of other people.

Review of the Literature

The literature review will deal first of all with some of the correlates and consequences of social withdrawal in children. Secondly,

research on social cognitions in children will be presented. Thirdly, literature will be cited dealing with the social cognition of withdrawn children.

Psychological Problems of Socially Withdrawn Children

Research suggests an association between shy, withdrawn behaviour and various forms of psychopathology. Social withdrawal during childhood and adolescence has been associated with schizophrenia (Barthell & Holmes, 1968; Bower, Shellhamer & Daily, 1960; Fores, 1934; Kohn & Clausen, 1955; Schofield & Balion, 1959). Childhood social withdrawal is also associated with manic depressive disease (Kahn & Clausen, 1955). Unpopular children were found to be disproportionately represented later in life in a community wide psychiatric register (Cowan, Pederson, Babigian, Izzo & Trost, 1963). Stengel (1971), in a survey of the literature on suicide, concluded that the common denominator of a number of factors correlated with high suicide rate was social isolation. Low peer acceptance among children of higher socio-economic levels is also positively related to later juvenile delinquency (Roff, Sells & Gilden, 1972). Socially isolated children were found to be more likely to later drop out of school (Ullmann, 1957). Among a sample of service men who were former patients in a child-guidance clinic, those men rated by their childhood counsellors as having poor peer adjustment were likely to have received "bad conduct" discharges than those having more successful service records (Roff, 1961).

The research cited above, then, indicates that social withdrawal in childhood may be associated with various psychological problems in

later life. Consequently, there have been attempts to develop procedures for both the identification of socially withdrawn children and for modification of their sociometric status in the classroom. Research concerned with the identification of such children has employed behavioural checklists, sociometric ratings and teacher ratings (Gottman, 1977; Kupfer et al. 1974; La Gaipa & Wood, 1973). Other research on behavioural modification of such behaviour employing various reinforcement techniques has been conducted (O'Conner, 1972; Oden & Asher, 1977). This research has focused on behavioural aspects of the phenomenon of social withdrawal. Less emphasis has been placed on the cognitive or phenomenological aspects. Few attempts have been made to explore how the socially withdrawn child actually perceives interpersonal stimuli and events in his environment. Knowledge on how a person perceives his social world is essential for understanding and predicting how the person will behave.

Social Cognition

Research in the field of the perception of interpersonal events is a relatively recent development. Traditionally, children have been studied in terms of either social behaviour and/or cognitive development. Studies in children's social behaviour have been primarily directed towards the discovery of the conditions under which certain types of social behaviour occur, rather than the child's understanding of the social event. Studies which do pertain to the child's growing understanding of events have focused upon the understanding of the physical, non-social environment, e.g., conception of space, numbers,

geometry, etc. (see Flavell, 1977 for a description of such studies).

In a review article on social cognition, Shant's (1975) has summarized research on how children conceptualize other people. Shantz defines the area of social cognition as referring to..."how he characterizes others and makes inferences about their covert, inner psychological experiences (p. 259)." Shantz (1975) calls attention to two basic theoretical approaches to social cognition: cognitive-developmental theory and social psychological theory. The most basic difference between these two approaches has been that the first has involved child research while the second has involved adult research.

Cognitive Developmental Approaches

According to Kohlberg, (1969) cognitive developmental theory assumes that development involves basic transformations of cognitive structures. These transformations are not a direct result of either maturation or learning, but rather are a product of the interaction between the organism and the environment. Two of the major writers on mental development, from whose theories most of the research on the development of social cognition have stemmed, are Piaget (1970) and Werner (1948).

Although Piaget studied primarily the child's understanding of his non-social physical world, some of Piaget's work concerning stages of cognitive development and the concepts of egocentrism and decentration have been used extensively in the study of development of social cognition. As an illustration, Piaget's concept of egocentrism, which originally applied to the ability to see the spatial

perspective of another, has been broadened to apply to the ability to see the social perspective of another. Social egocentrism has been related to such aspects of social cognition as moral judgement (Rubin & Schneider, 1973), role taking (Feffer, 1970) and empathy (Borke, 1971).

Aspects of Werner's work (1948) have also been applied to the study of the development of social cognition. According to Werner, all development is a process of transition from global, undifferentiated states to states of greater differentiation, specification and hierarchical integration. Such parameters have been studied in developmental studies of interpersonal perception (Livesley & Bromley, 1973; Peevers & Secord, 1973).

Social Psychological Approaches

Two major social psychological approaches are attribution theory and person perception. In many experiments these two approaches are combined or are formulated in such a way that they conceptually overlap each other. These two approaches will be discussed as they were separate; however, it must be borne in mind that in a single study, both approaches may be present. The designation of an experiment as a representative of a certain approach is often arbitrary.

Attribution Theory

Major attribution theorists include Heider (1958) and Kelley (1967). According to attribution theory, man has a need to make sense out of the behaviour of others and to assign causes to their behaviour. The meaning that an event has for a person depends heavily

upon the cause that the individual assigns it. Attributions are made to lend stability and invariance to the social environment. This theoretical approach assumes that the assignment of social causes may involve systematic and active information seeking.

Several studies have tried to determine the types of motives that young children attribute to the behaviour of others. In several of these studies, stimulus persons are presented in vignettes that are ambiguous in nature and/or incongruous, (McClintock, 1975; Litven, 1973). It is thought that in a less structured, ambiguous and incongruous situation, the motives for the behaviour are less obvious and may evoke responses providing a more comprehensive view of the child's social cognitive processes. The use of such ambiguous vignettes is somewhat akin to the use of projective tests.

One of the more interesting studies of this type is that of Whiteman et al. (1977). Episodes were constructed in which the main character acted in ways incongruent with his traits, role or self-interest. The task instructions given to the children was to explain the behaviour of the main character. The authors found that with increases in age, there was an increased use of causal explanations and also of explanations using psychological terms.

Another branch of research dealing with attribution of motives, but stemming from a Piagetian tradition, is that which is concerned with the effects of perceived intentionality upon evaluations made of the behaviour of the stimulus person. Piaget (1965) asked the following questions. Are three behaviours, which are topographicaly identical, evaluated differently if one of the behaviours was emitted by

accident, the second by good intention, and the third with a bad intention in mind? Or do children evaluate behaviour not by the intention of the actor but by the seriousness of the outcome of the behaviour? In general, it has been found that younger children regard the seriousness of the outcome as the major determiner of blame judgement, whereas the intention of the actor is the basis for assigning blame judgements in older children (Piaget, 1965). These findings support Piaget's theory: Younger children focus on the overt visible outcomes, whereas older children think in conceptual terms and focus more on covert, psychological processes.

Person Perception

Person perception research is described by Shantz (1975) as concerned with..."how an individual describes or categorizes another person or his actions and what disposition or traits he attributes to another (p. 268)."

A major methodological technique used in person perception research has been to provide subjects with a stimulus person by means of videotape, film, or written descriptions and to instruct the subjects to describe the stimulus person or to explain the motives for his behaviour by means of a checklist, rating scales or free responses. The aim of this type of research is to determine the form and content of the constructs by which the stimulus person is perceived. When emphasis is placed upon determining the content of explanatory constructs, the field of person perception partially overlaps the field of attributional research.

The present research focusses on free responses. Generally a scoring or coding system is used to analyze and classify the content and structure of the free responses. A number of these coding systems have been devellped. Flapan (1968) categorized children's responses to changes of feelings by means of a three category system: reporting-description, explaining, and inferring-interpreting. In order to classify explanations, Bromley (1968) has employed six types of explanatory concepts: motivation, habit, generalized trait, orientation, circumstances and role. Whiteman et al. (1977) have developed a comprehensive system of categories of explanations that includes noncausal, expressive, reactive and motivational; with each category divided into two or more subcategories. In order to classify free descriptions, Little (1968) uses a three fold classification of constructs: psychological (character, personality, e.g., "kind"); physicalistic (outward appearance, e.g.,"tall"); and role (habitual role, e.g., "teacher"). Duck (1975) has added an additional category to this three category system. Duck includes interaction which focuses on behaviour in face-to-face ongoing social interaction (e.g., "shouts a lot").

Thus, studies of this type can provide valuable information about the types of cues and perceptual categories utilized by the individual. For example, some people may describe others in terms of such overt attributes as appearance and possessions, whereas some others may describe people in terms of covert attributes such as abilities and attitudes. Some people may attribute the motives of the behaviour of

others to situation variables; whereas others may attribute the motives of the behaviour to psychological attributes. As the present study is concerned with the type of constructs used by children in interpreting the behaviour of others, some of the important work in this area are reviewed below.

Livesley and Bromle (1973) asked school children, varying in age from seven years to sixteen years, to provide eight descriptions of other people presented by film. Among other findings, it was found that the number and proportion of psychological statements increased with age. At age seven and below children tended to concentrate upon overt qualities such as appearance and possessions while chidren of eight years and older tended to use more inferential concepts. These results support Piaget's theory that younger children tend to focus upon overt visible characteristics; whereas older children focus upon covert psychological processes. Younger children tended to use vague and diffuse adjectives while older children, usually above ten years, tended to use more precise and abstract adjectives. Generally trait vocabularies grew particularly between seven and ten years of age. These results support Werner's theory that perception becomes more differentiated with increasing age.

Barenboim (1976) studied changes in the interpersonal cognitive systems from middle childhood to adolescence. The task was to describe three different persons that were well known to the subjects. The person descriptions were analyzed using five "organizing relationships" scoring categories, adapted from the work of Livelsey and

Bromley (1973). There were age-related increases in use of organizing relationships as well as in the increased use of psychological constructs.

Perhaps, the most frequently used instrument for studying person perception is the REP test based on Kelly's (1955) theory of personal constructs. Using this instrument, Little (1968) found there was a shift from early to late adolescence (from eleven to eighteen years) away from the use of physicalistic constructs to the increased use of psychological attributes. The results also indicated that post-adolescent females tend to use a larger proportion of psychological constructs than males, whereas males use significantly more role constructs than females across the total age range. Duck (1975) also found an increasing use of psychological and interactional constructs and a decrease in physical constructs from early to mid to late adolescence.

Flapan (1968) presented children, aged six to twelve, with movie sequences and asked the children to account for the change of feelings depicted in the sequences. Flapan found that with increase in age more children, gave causal explanations. Also the youngest children, aged six, reported mostly in situational terms. The first type of explanations to occur are those made in situational terms. Explanations in psychological terms occur later in development, followed by explanations in terms of inter-personal perceptions. The greater changes of all kinds occurred between ages six and nine.

Moreover, children tend to move away from simply reporting overt

characteristics of the person towards explaining the personality of the stimulus person in terms of psychological constructs. Rothenberg (1970) examined inferences made as to another person's feelings. Third and fifth grade students were presented with audio tape stories which depicted a change of feeling for the main character. The child was asked to describe how the actor felt and why he felt that way. Rothenberg found that older children (fifth grade students) showed a greater understanding of motives than the younger, third grade children.

The above review illustrates the influence of age upon the kinds of qualities and motives perceived in others. However, the kinds of qualities and causes perceived in others is also influenced by other factors. Two of these factors that will be discussed are role relationships and individual differences.

Role Relationships

A number of investigators have pointed out that the kinds of qualities that we perceive in others are affected by the kinds of relationships established. Information about a person's role has a selective effect on those aspects of another person we attend to (Livesley & Bromley, 1973). The present research is concerned with the effect of the role of friendship relationships upon interpersonal perception. Surprisingly little research has been done on the perception or expectations of persons in friendship role relationships. Bigelow and La Gaipa (1975) have developed an extensive coding system for tapping expectations of a hypothetical best friend. La Gaipa and Wood (1974) presented children in grade seven with four stimulus per-

sons by means of written vignettes. The vignettes provided descriptions of children characterized as social-emotional, task-competent, socially withdrawn and aggressive. The withdrawn stimulus person was perceived as more likely to be empathic, loyal, and desirable as a friend than the aggressive person. But both the withdrawn and aggressive stimulus persons were perceived as less likely to possess such qualities than the positive stimulus person.

Individual Differences

With respect to individual judgement differences (Kelly, 1955) argued that a perceiver's inferences concerning another may reveal more about the said perceiver than about the stimulus person. Inferences have been suggested as likely affected by personality motivational variables (cf. Schneider, 1974). Travis and La Gaipa (1974) presented college students with vignettes of five stimulus persons: impulsive, aggressive, autonomous, affiliative and orderly. The subjects were also administered the Jackson Personality Research Form (PRF) which taps these personality dimensions and twelve friendship expectancy statements. Correlations were computed between the PRF scales and the friendship probability statements for all five stimulus persons. More correlations were significant for similar than for dissimilar stimulus persons. It appears that the personality traits of the stimulus person are more potent or relevant when the traits of the perceiver and the perceived are similar.

Some studies have also shown aspects of social cognition to be related to such individual differences as state of mental health and

emotional adjustment. Moss (1974) found that adult psychopaths performed significantly poorer than normal adults on tests of interpersonal perception and used significantly less differentiated constructs on a task of impression formation.

Steiner (1974) found that depressed college women, as compared to controls, were developmentally more immature in their interpersonal problem solving methods and in their interpretation of interpersonal events (as assessed through examination of their explanations). Compared to normals, depressed women were also poorer in differentiating and integrating various aspects of interpersonal behaviour and reported more negative affective responses to these situations. The results supported the hypothesis that depressed persons display a wide range of idiosyncratic cognitive operations.

Rizley (1976) measured the degree to which depressed college students and controls rated internal causal factors (effort and ability) to be causal determinants of both success and failure situations. He found that depressed subjects rated internal causal factors to be more important determinants of failure, but less important determinants of success than did controls. Also control subjects, expressed a self-serving bias in causal ascriptions while depressed subjects provided similar causal ascriptions for both success and failure conditions and other positive and negative conditions. These results were seen as supporting the premise that depressed people suffer from cognitive distortions concerning causality and that the depressed individual overestimates his causal responsibility in the occurance of negative

but not positive events.

Matkom (1963) reported that when given both positive and negative information about a stimulus person, maladjusted people were more confident than were the controls that the negative information was true. No difference was found for confidence levels when the two groups were given positive information about the stimulus person. This suggests that the maladjusted expected other people to have unfavourable qualities.

While there have been several studies reporting deficiencies in non-social cognitive skills for poorly adjusted children, as compared to normal children (Pabis, 1977; Cook, 1975), there has been relatively little research with children concerned with the effects of emotional adjustment upon social cognition.

Chandler (1973) compared delinquent boys, with non delinquent boys. Both groups were aged eleven and thirteen. It was found that delinquent boys displayed significant deficits on tasks of social-perspective taking tasks, i.e., they had difficulty seeing social events from the point of view of anothers.

Goldstein (1973) compared boys, aged five to twelve, who had been patients in a psychiatric clinic with normal children of the same age, on a test of the awareness of unconscious motives of others. It was found that clinic children had a poorer overall understanding of psychological causality. This awareness of psychological causality appeared to develop more slowly and over a longer period of time for the clinic population than for the non-clinic population.

Thus, the above review indicates that most of the research on social cognition in children has been chiefly concerned with developmental changes. The effects of non-age variables, such as sensitivity to certain roles and individual differences, upon social cognition has been little studied. One particular deficit has been the lack of research concerned with children's interpersonal perception of friends. Do children perceive and interpret the behaviour of those cast in the role of friend differently from those cast in the role of non-friend? This deficiency is striking in view of the fact that the formation of friendships plays an essential part in the development of the child. Another deficit has been the lack of attention paid to the effects of such individual differences as emotional adjustment, upon social cognition. This deficiency is particulary striking in view of the fact that there exists some evidence from the research on adults that disturbances in emotional health are associated with disturbances in social cognition.

The Social Cognition of the Withdrawn Child

We are now in a position to return to our original proposition of surveying the literature on the social cognition of the withdrawn child. There have been only a modest number of studies touching upon this area. A review of these studies follow.

One area in which withdrawn and normal children differ is in their perception of friendships. La Gaipa and Wood (1973) administered to sixth, seventh and eighth grade students the Children's Friendship Expectation Inventory - a questionnaire designed to determine the qual-

ities that individuals consider the most important in a same-sex friend. The scale includes such qualities as conventional morality, mutual activities, empathic understanding, loyalty and commitment. It was found that withdrawn children rated empathy as being less important in friendship than did nonwithdrawn and popular children. In a subsequent study based on Erikson's theory of psycho-social development, Wood (1976) found that withdrawn children as compared to popular children expressed more TAT themes of distrust. The less adequate resolution of the trust-distrust crisis by the withdrawn suggests that they are developmentally less mature than popular children.

Yarrow and Campbell (1963) found that when withdrawn children, aged eight to thirteen, were asked to provide descriptions of their peers, they tended to give less complex descriptions. The personality portraits by withdrawn children tended to be less integrated than those of normals and/or were less explicit in inferences made about the behaviour of the described peer. The withdrawn tended to give vague, global generalizations that were inadequately supported. Similar findings were obtained by Rothenberg (1970). Third and fifth grade children, identified as being socially apprehensive (as opposed to friendly), scored lower on a test of social sensitivity after listening to a taped series of dramatic interaction between two persons. Withdrawn children were less able to identify correctly the emotions of the actor and when asked to explain the reasons for his emotion, tended not to make inferences. Spivack and Shure (1974) found that shy, withdrawn four year

old children were inferior in social cognitive problem solving skills than were adjusted children, i.e., they were not able to think through ways to solve typical problems successfully and were less able to conceptualize alternative solutions. Verbal ability scores did not significantly affect the results.

What these studies appear to suggest is that insofar as there are developmental changes in the ascription of complex descriptions, and in the kind of inferences and explanations made by children, the withdrawn appear to operate at a somewhat less mature, cognitive-developmental level than normal children.

Statement of the Problem

The above review of the literature has suggested that withdrawn behaviour in childhood may be associated with later adult psychopathology. While there has been some research focusing upon the identification of such children and the modification of their behaviour, there has been little direct exploration of their interpersonal perception and other social cognitive processes. However, research of this type is clearly warranted in view of the intuitively obvious notion that there exists a relationship between the perception of social events and social behaviour. Unusual social experiences may foster unusual perception of social events and/or unusual perception of social events may precipitate unusual social behaviour. The need for such research is even more pressing in view of the fact that an association between abnormalities in social cognition and psychopathological behaviour has indeed been reported by several researchers

(Moss, 1974; Rizley, 1976). Thus it appears that the exploration of the social cognitive processes of withdrawn children is a fruitful area of study in that it will provide important contributions to the study of child psychopathology.

The dearth of research pertaining to the social cognition of withdrawn children may be understandable in view of the fact that the study of social cognition is a relatively young field. Most of the research has focussed upon developmental changes and not upon individual differences, such as the differences between normal and withdrawn children. Thus the study of the social cognitive processes of withdrawn children gains additional importance in that it may provide knowledge to the study of the effects of individual differences upon social cognition.

Many aspects of social cognition may be explored. According to Shantz (1973) the aspects of this field which have been studied may be classified as inferences about another's visual perspective, feelings, thoughts, intentions and personality structure. In most of these studies, the child is asked to respond to only one of these aspects. Generally, the child is asked to respond to a "what"-type question, e.g., "What is the other child feeling?" Such a procedure artifically promotes into prominence one type of inference and neglects the interactional effect of other types of inferences. Rarely, is the child asked to integrate his inferences about another's feelings, thoughts, intention, etc. in order to demonstrate a more complete understanding of the social situation.

Such an integration of various inferences might possibly occur in studies in which the child was asked to explain the social behaviour of others. In this type of study, the child would be asked to respond to a "why"-type question, e.g. "Why did the other child do that?" The advantage of a study of children's explanations over the previously mentioned type of studies is that this type of study would afford the researcher a more complete and integrated view of the child's social cognition.

There are various aspects of explanations that may be studied. As in the study of free description, explanations may be classified according to the type of construct used. Several classification systems have been developed (Bromley, 1968; Whiteman, 1977). One of the most basic classifications of explanations is in terms of causal and non-causal reasoning. Causal reasoning is distinquished from non-causal reasoning in that causal reasoning reflects the conventional laws of logic and cause and effect. Causal explanations are then commenly subclassified as explanations in terms of situation, personal qualities or role. An explanation in terms of situation is one which ascribes the cause of the behaviour as being due to some aspect of the setting, e.g. He was late because there was a snowstorm. An explanation in terms of personal qualities locates the cause of the behaviour onto some characteristic of the persons involved in the situation, e.g. John helped Sue because he was nice. An explanation in terms of role attributes the cause of the character's behaviour onto social roles, e.g. He helped because he was a priest. The type of constructs used predominately can reflect the anchors by which an

individual structures his world.

Explanations may be studied not only by the type of construct used, per se, but also in view of developmental trends. Certain types of explanations and certain types of constructs appear to emerge at different ages. The explanations of younger children, appear to be characterized by non-causal reasoning more so than those of older children (Flapan, 1968). Explanations in situational terms appear to occur earlier in development; whereas explanations in psychological terms occur later in development (Flapan, 1968; Whiteman, 1977).

Also, explanations may be studied in terms of their affective quality. Are the explanations of certain people characterized by a pessimistic or optomistic tone? Do some people explain social interaction as arising predominately from selfish, jealous and other disagreeable motives; whereas do other people explain social interactions as arising from predominately loving, caring and other agreeable motives? The type of affective tone predominately used can reflect the general emotional orientation of that individual.

Furthermore, the type of explanations given may be studied in relation to the type of cues present in the social situation. One such type of cue is that of role. How do explanations vary when certain role relationships are made salient. Even more interesting is this question. Do different populations vary in their explanations when certain role relationships are made more salient? Manipulation of this type of cue can provide information about the importance of certain roles for different individuals.

Another type of cue, which can be manipulated in an effort to elicit different types of explanation, is the quality of the social interaction. Certain social interactions may be deemed "positive" such as those involving accepting, helpful, caring and loyal behaviour. Other social interactions may be deemed "negative" such as those involving rejecting, deceitful, insulting and unkind behaviour. How do explanations vary when the quality of the social interaction is described as positive or negative? Even more interesting is the question: Do different populations vary in their explanations when the quality of the social situation to be explained is positive or negative?

Little research has been conducted on the explanations of social interactions given by children. Fewer research still has directly focussed upon the explanations given by withdrawn versus normal children. The present research was conducted in an effort to supply information to these areas of study. In this study, withdrawn children were presented with a series of short stories depicting a social interaction. The children were asked after each story to answer why the acting character behaved the way he did.

Certain cues in the social situation of the stories were manipulated. One of these cues was that of role. The roles that were manipulated were that of friend and classmate. The role of friend was chosen for manipulation because withdrawn children by definition have relatively few friends. The role of classmate was chosen as a neutral condition, i.e., some one who was not a stranger but who was not known very well. Therefore, it was thought that the friend role would have a dif-

ferent meaning and value for withdrawn and normal children and thus would differentially affect the types of explanations given by the two groups.

The second cue that was manipulated was that of quality of the social interaction. One half of the stories described a negative interaction; whereas the other half of the stories described a positive interaction. This cue was chosen because withdrawn children are typically thought of as being more rejected and/or rejecting than normal children. Thus it was thought that withdrawn children and normal children might have different reactions and might supply different meanings to these two types of interactions. Thus it was thought that this type of cue would affect the type of explanations given differentially between the two groups.

The basic questions of this exploratory study were as follows: Do withdrawn children differ from normal children in (1) the kind of explanations made in terms of both explanatory construct and affective tone; (2) in the type of explanation construct used when the stimulus person is presented as a friend or classmate; and (3) in the type of explanation construct used when the situation depicts a positive or negattive social interaction?

CHAPTER II

METHOD

Subjects

256 boys and 266 girls gathered from eighteen different sixth-grade classrooms and sixteen different public schools in the city of Windsor, participated in this study. Of this total population, fifteen percent were described by their teacher as being withdrawn, forty percent were described as being normal and forty-five percent were described as being either popular, aggressive or a mixture of these two characteristics. Ninety percent of the withdrawn children and thirty percent of the normal children ultimately served as subjects. The distribution of these two groups by sex were as follows: forty-three withdrawn girls, twenty-seven withdrawn boys, thirty-three normal girls and twenty six normal boys. All students possessed at least normal intelligence.

Instruments

Behavioural Description Form. This instrument was derived from the Windsor Guess Who Test (Wood, 1972; La Gaipa & Wood, 1973). This teacher rating form contains a brief description of a withdrawn child, a popular child and an aggressive child. The teacher is asked to place each child in his classroom into one of the categories if the child fits the description or into a separate category if the child does not fit any of the descriptions. Validity data on this rating form are found in Wood (1976). The form itself is found in

Appendix A.

Vignettes. A series of eight vignettes developed by the author served as the test material (Appendix B). Each vignette depicted a situation in which one character acted in a certain way towards the other character. The reason for the main character's behaviour is not clearly specified. The child was asked to write down the main reasons for the main character's behaviour.

An important characteristic of the stories is that the underlying motive of the main character is not self-evident. Some ambiguity is essential so that the behaviour is subject to multiple interpretations. Otherwise, individual differences in explanations and interpretations may not be facilitated.

The two dimensions that were manipulated in the construction of the vignettes are (1) role, i.e., friend or classmate and (2) quality of the social interaction, i.e., positive or negative. The stories depicted each of the following situation: behaviour involving friends that led to a positive outcome; behaviour involving friends that led to a negative outcome; behaviour involving classmates that led to a positive outcome and behaviour involving classmates that led to a negative outcome. There were two stories of each type of the four story patterns.

Different forms of the stories were distributed to boys and girls during regular classroom sessions. In both forms the situation and behaviour depicted were identical. However, in the stories given to boys, the characters in the stories, were designated as boys. In

the forms given to girls, the characters in the stories were designated as girls.

All eight vignettes were printed in a booklet. The instructions on the booklet were as follows:

> Read each of the eight stories carefully. Answer the questions at the end of each story as best as you can. Write down the answers to all the stories. There are no right or wrong answers. Write down what you think.

Procedure

The teacher of each class administered the vignettes to the entire class, during the regular class time. The children were given the booklets containing the vignettes and were read the instructions by the teacher. They were told that they had thirty minutes to finish the stories. They were asked if they had any questions.

The teacher also filled out the Behavioural Description Form in order to identity the withdrawn and normal children. Each child who had been identified as withdrawn and who had completed the answer form served as a subject in this study. An attempt was made to select at random, for participation in this study, a normal child of the same sex and within the same classroom as each participating withdrawn child.

Coding

The inter-relationship among the explanation categories is

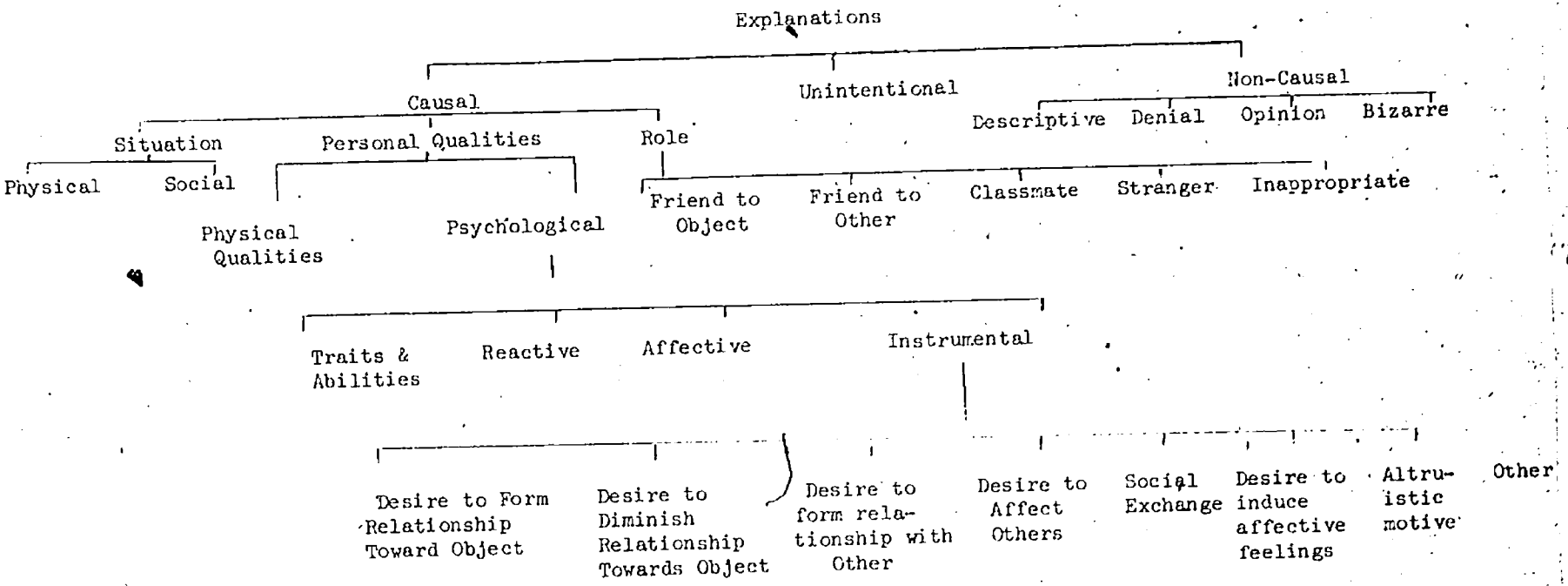
graphically illustrated in Diagram 1. The most basic classification of explanations is in terms of causal and non-causal reasoning. Causal reasoning, as opposed to non-causal reasoning, reflects the conventional laws of logic and cause and effect. Causal explanations are then further subclassified as explanations in terms of situation, personal qualities and role.

Explanations in terms of situation ascribes the cause of the behaviour to some aspect of the setting. Explanations in terms of situation are further subdivided into physical situation explanations and social situation explanations. Physical situation explanations locate the cause of the behaviour onto the physical or temporal demands of the situation.; whereas social situation explanations locate the cause of the behaviour onto the social aspects of the situation.

Explanations in terms of personal qualities locate the cause of the behaviour onto some characteristic of the people involved in the situation.

Explanations in terms of personal qualities locate the cause of the behaviour onto some characteristic of the people involved in the situation. Personal qualities explanations are subdived into explanations in terms of physical qualities and psychological qualities. Physical qualities explanations ascribe the cause of the behaviour onto some physical characteristic of the people involved, e.g. age, appearance. Psychological qualities explanations ascribe the cause of the behaviour onto personality factors. These personality factors include traits, abilities, emotional state, reactions to the behaviour of others, ambitions, desires and instrumental plans.

DIAGRAM OF EXPLANATION CATEGORIES



Role explanations are explanations which attribute the cause of the acting character's behaviour to social roles. Several types of role explanations are to be distinquished. Explanations in which the cause of the main character's behaviour is seen as being due to the fact that he is friends with the other main character of the story or with someone other than the main character of the story is designated as friend to object and friend to other role explanations, respectively. Explanations in which the behaviour in question is seen as occurring because the main characters are classmates are designated as classmate role explanations. Explanations in which the behaviour in question is seen as occurring because the main characters do not know each other are designated as stranger role explanations. Explanations in which the explainer attributes the cause of the behaviour in question to a social role other than that dictated by the vignette is designated as an inappropriate role explanation.

Each explanation was also coded for the affective tone, (positive, negative or neutral), which it conveyed. An explanation is classifed as conveying a positive affective tone if it contains mention of an obvious positive trait, feeling, motivation or event. An explanation is classified as conveying a negative affective tone if it contains mention of an obvious negative trait, feeling, motivation or event. An explanation is classified as conveying a neutral tone if it contains mention of a trait, feeling, motivation or event which is not obviously positive or negative.

The coding system for Explanation Types and for Affective Tone as well as the rules for the codings are presented in Appendix C and Appendix D respectively.

Statistical Analyses

The objective of this study was to determine whether withdrawn children differ from normal children in their use of certain types of explanations. In order to answer this question, several stepwise discriminant function analyses were performed.

Discriminat function analysis is a statistical technique which attempts to distinquish between two or more groups on the basis of the subject's responses to certain selected "discriminating variables" that measure characteristics on which the groups are expected to differ. In order to accomplish this, the discriminating variables are weighed and linearly combined in an equation, in such a way that the two groups are as statistically distinct as possible. In a stepwise analysis independent discriminating variables are selected for entry into analysis on the basis of their discriminating power, until the addition of no other variables will provide a minimal level of improvement in the discrimination. In order to determine whether the resulting function discriminates between the two groups to a significant degree, several tests of significance, such as a chi-square upon Wilk's lambda can be performed.

Discriminative analysis has an advantage over other possible techniques such as chi-square in that it allows computation of tests of significance between groups of correlated dependent variables.

Also, by observation of the relative weights of the discriminative coefficients in the discriminative function, the relative importance of the different discriminative variables in that function may be assessed.

The items in the first analysis were the main explanatory response types. These items were total number of situational explanations; total number of role explanations and total number of non-causal explanations.

In order to obtain a finer measure of the type of explanations which discriminated among withdrawn and normal subjects, the subtypes of the main explanatory responses were entered as items in a second stepwise discriminant function. Not every subtype of all the main explanatory responses were entered in this analysis as items. This was because an initial comparison of the distribution frequencies of the number of responses for these different subtypes suggested that several categories could be collapsed together due to the small percentage of subjects responding to some of these subcategories. The items in the second analysis were: physical qualities explanations, psychological qualities explanations, friend to object role explanations, friend to other role explanations, classmate role explanations, stranger role explanations, inappropriate role explanations and non-causal explanations.

In order to determine whether withdrawn and normal subjects could be distinguished on the basis of the affective tone of their explanations, a third discriminative function analysis was performed.

The items in this third analysis were positive tone, negative tone and neutral tone.

In order to determine whether withdrawn children differ from normal children in the type of explanations used when the cues of social interaction and role are manipulated, all three discriminative analyses were also performed across each of the four types of stories separately. The discriminative analyses were also performed across the normal and withdrawn groups by sex.

Thus, in all, three discriminative analysis were performed comparing the responses of withdrawn children to normal children; withdrawn boys to withdrawn girls; withdrawn boys to normal boys; withdrawn girls to normal girls and normal girls to normal boys. Each analysis was performed for all the stories combined and for each separate story.

CHAPTER III

RESULTS

Inter-Rater Reliability

Two judges independently rated each of the stories in terms of the role type (friend or classmate) and the quality of interaction (positive or negative). The percent of agreement for both types of cues was 100 per cent.

After the data were collected, two judges coded the responses of the children in terms of the explanatory categories used and in regard to the affective tone of the responses. Ten per cent of the data was coded by the two independent raters. The quidelines used for both rating systems are described in Appendix C and D. A high level of inter-coder reliability was found, varying from a level of agreement of 83 % to 100%. The specific data regarding inter-coder reliability are provided in Appendix E.

Discriminant Function Analyses

The percentage of children responding to each of the explanation categories and their mean number of responses to each of these categories is illustrated in Appendix F and Tables 1, 2,3,4, and 5 respectively. Two separate discriminative function analyses were performed to determine the types of explanation responses which distinquished withdrawn from normal children. The first discriminative function analysis included the main explanation categories; whereas the second discriminative analysis used the subtypes as discriminating variables. A third

TABLE 1

MEAN NUMBER OF RESPONSES TO ALL STORIES COMBINED FOR NORMAL AND WITHDRAWN CHILDREN

Explanation Categories	Mean Number of Responses					
	Withdrawn Girls	Withdrawn Boys	Normal Girls	Normal Boys	Withdrawn Children	Normal Children
Physical situation	0.14	0.15	0.09	0.10	0.14	0.09
Social situation	0.04	0.05	0.05	0.09	0.04	0.06
Total situation	0.18	0.19	0.14	0.18	0.18	0.16
Physical Qualities	0.06	0.05	0.02	0.05	0.05	0.03
Psychological Qualities	1.60	1.50	1.83	1.46	1.57	1.67
Total Personal Qualities	1.64	1.53	1.75	1.50	1.60	1.64
Friend to Object Role	0.40	0.36	0.33	0.30	0.38	0.32
Friend to Other Role	0.03	0.06	0.07	0.01	0.04	0.04
Classmate ble	0.05	0.05	0.03	0.01	0.05	0.02
Stranger Role	0.05	0.08	0.02	0.03	0.06	0.03
Inappropriate Role	0.06	0.01	0.01	0.03	0.04	0.02
Total Role	0.49	0.55	0.39	0.35	0.52	0.37
Total Non Causal	0.11	0.11	0.11	0.12	0.11	0.11
Positive Tone	0.39	0.34	0.55	0.40	0.37	0.48
Negative Tone	0.66	0.56	0.57	0.50	0.62	0.55
Neutral Tone	0.35	0.37	0.41	0.35	0.35	0.38

TABLE 2

MEAN NUMBER OF RESPONSES TO STORIES WHICH DEPICT A POSITIVE INTERACTION BETWEEN FRIENDS FOR NORMAL AND WITHDRAWN CHILDREN

Explanation Categories	Mean Number of Responses					
	Withdrawn Girls	Withdrawn Boys	Normal Girls	Normal Boys	Withdrawn Children	Normal Children
Physical Situation	0.12	0.04	0.06	0.04	0.09	0.05
Social Situation	0.0	0.0	0.03	0.0	0.0	0.02
Total Situation	0.12	0.04	0.09	0.04	0.09	0.07
Physical Qualities	0.09	0.15	0.03	0.08	0.11	0.05
Psychological Qualities	0.98	1.07	1.39	1.00	1.01	1.22
Total Personal Qualities	1.05	1.15	1.42	1.08	1.09	1.27
Friend to Object Role	1.53	1.26	1.33	1.19	1.43	1.27
Friend to Other Role	0.02	0.0	0.0	0.0	0.01	0.0
Classmate Role	0.0	0.0	0.03	0.0	0.0	0.02
Stranger Role	0.0	0.0	0.0	0.0	0.0	0.0
Inappropriate role	0.0	0.0	0.0	0.04	0.0	0.02
Total Role	1.28	1.30	1.12	1.23	1.29	1.67
Total Non Causal	0.05	0.07	0.03	0.0	0.06	0.02
Positive Tone	0.28	0.11	0.24	0.23	0.21	0.24
Negative Tone	0.02	0.04	0.0	0.0	0.03	0.0
Neutral Tone	0.53	0.67	0.70	0.69	0.59	0.69

TABLE 3

MEAN NUMBER OF RESPONSES TO STORIES WHICH DEPICT A NEGATIVE INTERACTION BETWEEN FRIENDS FOR NORMAL AND WITHDRAWN CHILDREN

Explanation Categories	Mean Number of Responses					
	Withdrawn Girls	Withdrawn Boys	Normal Girls	Normal Boys	Withdrawn Children	Normal Children
Physical Situation	0.42	0.52	0.30	0.35	0.46	0.32
Social Situation	0.07	0.19	0.06	0.23	0.11	0.14
Total Situation	0.49	0.67	0.36	0.58	0.56	0.46
Physical Qualities	0.07	0.0	0.0	0.0	0.04	0.0
Psychological Qualities	1.33	1.11	1.58	1.15	1.24	1.39
Total Personal Qualities	1.37	1.11	1.45	1.15	1.27	1.32
Friend to Object Role	0.47	0.38	0.0	0.0	0.04	0.0
Friend to Other Role	0.09	0.11	0.15	0.04	0.10	0.10
Classmate Role	0.0	0.0	0.0	0.0	0.0	0.0
Stronger Role	0.0	0.0	0.0	0.0	0.0	0.0
Inappropriate Role	0.0	0.04	0.0	0.0	0.01	0.0
Total Role	0.14	0.19	0.15	0.04	0.16	0.10
Total Non Causal	0.26	0.30	0.24	0.31	0.27	0.27
Positive Tone	0.05	0.0	0.09	0.0	0.03	0.05
Negative Tone	1.07	0.74	0.97	0.85	0.94	0.92
Neutral Tone	0.16	0.22	0.27	0.15	0.19	0.22

TABLE 4

MEAN NUMBER OF RESPONSES TO STORIES WHICH DEPICT A POSITIVE INTERACTION BETWEEN CLASSMATES FOR NORMAL AND WITHDRAWN CHILDREN

Explanation Categories	Mean Number of Responses					
	Withdrawn Girls	Withdrawn Boys	Normal Girls	Normal Boys	Withdrawn Children	Normal Children
Physical Situation	0.0	0.0	0.0	0.0	0.0	0.0
Social Situation	0.0	0.0	0.0	0.0	0.0	0.0
Total Situation	0.0	0.0	0.0	0.0	0.0	0.0
Physical Qualities	0.02	0.0	0.03	0.04	0.01	0.03
Psychological Qualities	2.05	2.12	2.45	2.04	2.07	2.27
Total Personal Qualities	2.05	2.16	2.24	2.04	2.07	2.15
Friend to Object Role	0.0	0.04	0.0	0.0	0.01	0.0
Friend to Other Role	0.0	0.08	0.03	0.0	0.03	0.02
Classmate Role	0.12	0.19	0.09	0.04	0.15	0.07
Stranger Role	0.02	0.12	0.03	0.0	0.06	0.02
Inappropriate Role	0.21	0.0	0.03	0.04	0.13	0.03
Total Role	0.36	0.42	0.15	0.03	0.38	0.12
Total Non Causal	0.05	0.0	0.03	0.04	0.03	0.03
Positive Tone	1.26	1.23	1.70	1.27	1.25	1.50
Negative Tone	0.02	0.04	0.03	0.0	0.03	0.02
Neutral Tone	0.24	0.31	0.24	0.27	0.26	0.25

TABLE 5

MEAN NUMBER OF RESPONSES TO STORIES WHICH DEPICT A NEGATIVE INTERACTION BETWEEN CLASSMATES FOR NORMAL AND WITHDRAWN CHILDREN

Explanation Categories	Mean Number of Responses					
	Withdrawn Girls	Withdrawn Boys	Normal Girls	Normal Boys	Withdrawn Children	Normal Children
Physical Situation	0.02	0.04	0.0	0.0	0.03	0.0
Social Situation	0.07	0.0	0.09	0.12	0.04	0.10
Total Situation	0.09	0.04	0.09	0.12	0.07	0.10
Physical Qualities	0.85	0.31	0.03	0.08	0.04	0.05
Psychological Qualities	2.09	1.77	1.88	1.68	1.97	1.80
Total Personal Qualities	2.09	1.77	1.88	1.72	1.97	1.81
Friend to Object Role	0.0	0.08	0.0	0.0	0.03	0.0
Friend to Other Role	0.0	0.04	0.09	0.0	0.01	0.05
Classmate Role	0.07	0.0	0.0	0.0	0.04	0.0
Stranger Role	0.16	0.19	0.06	0.12	0.17	0.08
Inappropriate Role	0.05	0.0	0.0	0.04	0.0	0.02
Total Role	0.19	0.27	0.12	0.04	0.25	0.08
Total Non Causal	0.07	0.08	0.15	0.12	0.07	0.14
Positive Tone	0.0	0.04	0.18	0.08	0.01	0.14
Negative Tone	1.44	1.42	1.27	1.20	1.46	1.25
Neutral Tone	0.44	0.27	0.42	0.28	0.38	0.36

analysis was performed to determine if differences exist in the affective tone of their responses.

Discrimination by Type of Explanatory Category Used

Appendix G presents the results for the discriminative function analysis of withdrawn children versus normal children. The results for the main explanation categories indicate that withdrawn children differed from normal children across all stories on the basis of their use of explanatory categories in terms of situational, personal qualities, and role variables ($p < .06$). Since there were more girls than boys in this study, the overall discrimination between normal children and withdrawn children is biased. Accordingly I am taking into account the sex of the subject.

Withdrawn Girls and Normal Girls

Examination of the analysis using the main explanatory categories, shown on Table 6, reveals that no function discriminated between these two groups for all stories combined. However, the analysis using the subtypes of the main explanatory categories as variables, Table 7, indicates that the two groups could be distinguished ($p < .03$) on the basis of explanations in terms of physical situation, psychological qualities, friend roles and inappropriate roles. All of these variables appeared to contribute approximately equally to the discriminating power of the function. Table 1 shows that withdrawn girls give more explanations in terms of physical situational explanations and inappropriate role; whereas normal girls tend to respond more in terms of psychological qualities and friend roles.

Table 6

Discriminant Function Analysis for Withdrawn Girls and Normal Girls on the Main Explanation Categories

	Discriminant Functions By Story Type				
	Positive Interaction Between Friends	Negative Interaction Between Friends	Positive Interaction Between Classmates	Negative Interaction Between Classmates	All Stories Combined
Canonical Correlation	0.54	-	.10	.34	.09
Significance of Function	0.01	-	.38	.003	.27
Variables					
Total Situation	°	-	°	°	°
Total Personal Qualities	1.00	-	°	°	°
Total Role	°	-	°	°	°
Total Non-Causal	°	-	°	1.00	°
% of Grouped Cases Correctly Classified	62	-	53	59	52

Note. All discriminant function coefficients reported are based on Wilks' Lambda. The (°) indicates that the discriminant coefficient was insignificant at the level of $p < .1$. The (-) indicates that no computation was performed due to an insignificant F-level.

Table 7

Discriminant Function Analysis for Withdrawn Girls and Normal Girls on the Subtypes of the Main Explanatory Categories

	Discriminant Functions By Story Type				
	Positive Interaction Between Friends	Negative Interaction Between Friends	Positive Interaction Between Classmates	Negative Interaction Between Classmates	All Stories Combined
Canonical Correlation	0.26	-0.07	0.31	0.34	0.21
Significance of Function	0.09	-0.56	0.06	0.03	0.03
Variables					
Physical Situation	°	°	°	°	0.29
Social Situation	°	°	°	°	°
Physical Qualities	°	°	°	°	0.33+
Psychological Qualities	0.86	°	-0.53	°	-0.44
Friend to Object Role	°	°	°	°	°
Friend to Other Role	°	°	- .41+	0.70+	-0.47+
Classmate Role	0.53	°	°	0.58+	°
Stranger Role	°	°	°	°	°
Inappropriate Role	°	°	.59	°	57+

Table 7 Continued

Variables	Discriminant Function By Story Type				
	Positive Interaction Between Friends	Negative Interaction Between Friends	Positive Interaction Between Classmates	Negative Interaction Between Classmates	All Stories Combined
Total Non Causal	°	°	°	0.53	°
% of Grouped Cases Correctly Classified	63	°	61	65	57

Note. All discriminative function coefficients reported are based on Wilks' Lambda. The (°) signifies that the discriminant function was insignificant at the level of $p < .1$. The (+) indicates that the result was based on the responses of less than 10% of both groups.

There were also several significant effects according to type of story. For stories that depict a positive interaction between friends, the two groups could be significantly distinguished ($p < .01$) by the use of explanations in terms of psychological qualities and classmate role.

Also, on stories which depict a negative interaction between classmates, the two groups were distinguished on the basis of non-causal explanations. Normal girls gave more non-causal explanations. Analysis of the subtypes explanation categories show that the two groups differ in terms of friend roles, classmate roles and non-causal events. Withdrawn girls gave more explanations than did normal girls in terms of classmate role, whereas normal girls made more explanations in terms of friend roles and non-causal events.

Finally, there was a trend ($p < .06$) in the analysis of the subtypes for the two groups to be distinguished on stories which depict a positive interaction between classmates. Normal girls gave more explanations in terms of psychological variables and friend roles, whereas withdrawn girls gave more responses in terms of an inappropriate role. Each variable appeared to contribute approximately equally to the discriminating power of the function.

An overall inspection indicates that explanations in terms of personal qualities and role were the most discriminat; whereas explanations in terms of situation were the least. Also, stories which depict a negative interaction between friends were least discriminate.

Withdrawn Boys and Normal Boys

Table 8 presents data regarding the main explanatory categories. A trend was found ($p < .08$) for withdrawn boys to differ from normal boys in response to all stories combined. Withdrawn boys gave more explanations in terms of situational variables, personal qualities and role variables. The variable that contributes the most to the discriminating power of this function dealt with explanations in terms of roles.

The analysis by subtypes across all stories indicates that the two groups can be distinguished ($p < .03$) in terms of social situation, psychological qualities, friendship roles, inappropriate roles and non-causal events. These data are in Table 9. Normal boys provided more explanations in terms of inappropriate role and non-causal events, whereas the withdrawn boys made more use of the remaining types of explanations.

The withdrawn boys and normal boys also were discriminated in terms of explanations given in response to stories showing a positive interaction between classmates ($p < .02$). It may be observed in Table 4 that withdrawn boys make more use of explanations in terms of situation, personal qualities and role. Normal boys made more use of explanations in terms of non-causal events. Role explanations appear to contribute to the discriminating power of the function to a slightly greater degree than do the other variables. The analysis by subtypes reveals a similar trend ($p < .06$). It appears that the previously noted discriminating power of the personal qualities vari-

Table 8

Discriminant Function Analysis for Withdrawn Boys and Normal Boys on the Main Explanation Categories

	Discriminant Functions By Story Type				
	Positive Interaction Between Friends	Negative Interaction Between Friends	Positive Interaction Between Classmates	Negative Interaction Between Classmates	All Stories Combined
Canonical Correlation	0.04	-.08	0.44	0.34	0.18
Significance of Function	0.79	.60	0.60	0.12	0.08
Variables					
Total Situation	°	°	°	°	0.49
Total Personal Qualities	°	°	-0.74	°	0.79
Total Role	°	°	-1.18	°	1.21
Total Non Causal	°	°	0.40	°	0
% of Grouped Cases Correctly Classified	53	57	67	71	59

Note. All discriminant function coefficients reported are based on Wilks' Lambda. The (°) indicates that the discriminant coefficient was insignificant at the level of $p < .1$.

Table 9

Discriminant Function Analysis for Withdrawn and Normal Boys on the Subtypes of the Main Explanatory Categories

	Discriminant Functions By Story Type				
	Positive Interaction Between Friends	Negative Interaction Between Friends	Positive Interaction Between Classmates	Negative Interaction Between Classmates	All Stories Combined
Canonical Correlation	0.04	-	0.45	0.30	0.26
Significance of Function	0.79	-	0.06	0.11	0.05
Variables					
Physical Situation	°	-			
Social Situation	°	-		°	-0.62
Physical Qualities	°	-		°	°
Psychological Qualities	°	-	-0.68	°	-0.81
Friend to Object Role	°	-	-0.35+	°	-0.71
Friend to Other Role	°	-	-0.47+	°	-0.63
Classmate Role	°	-	-0.69	°	-0.45+
Stranger Role	°	-	°	°	-0.54+
Inappropriate Role	°	-	°	°	°

Table 9 Continued

Variables	Discriminant Functions By Story Type				
	Positive Interaction Between Friends	Negative Interaction Between Friends	Positive Interaction Between Classmates	Negative Interaction Between Classmates	All Stories Combined
Non Causal	°	-	0.36+	°	-0.35
% of Grouped Cases Correctly Classified	53	-	71	59	'64

Note. All discriminant function coefficients reported are based on Wilks' Lambda. The (°) indicates that the discriminant coefficient was insignificant at the level of $p < .1$. The (+) indicates that the result was based on the responses of less than 10% of both groups. The (-) indicates that no computation was performed due to an insignificant F-level.

able was due to the discriminating power of the psychological qualities subtype explanation rather than to the physical qualities subtype explanation. The most discriminating explanation appears to be those in terms of psychological qualities classmate role.

Overall inspection of the results for these two groups suggest that explanations in terms of personal qualities and roles may be somewhat more important in discriminating between the two groups than explanations in terms of situation. Also, only stories which depict a positive interaction between classmates, appears to elicit explanations which significantly discriminate between the two groups.

Withdrawn Girls and Withdrawn Boys

Examination of Table 10 reveals that no function discriminated between withdrawn girls and withdrawn boys, for all stories combined. However, the function generated in the analysis by subtypes discriminated between the two groups ($p < .03$) for stories which depict a positive interaction between classmates (see Table 11). The discriminating variables in this function were the use of explanations in terms of role and non-causal events. Each of these variables appeared to contribute equally to the discriminating power of the function. Inspection of Table 4 reveals that withdrawn boys use explanations in terms of stranger and friend roles more so than do girls. Girls tend to use explanations in terms of inappropriate role and non-causal events, more so than do boys. The significance of these findings, however, should be viewed with caution as less than ten percent

Table 10

Discriminant Function Analysis for Withdrawn Girls and Withdrawn Boys on the Main Explanation Categories

	Discriminant Functions By Story Type				
	Positive Interaction Between Friends	Negative Interaction Between Friends	Positive Interaction Between Classmates	Negative Interaction Between Classmates	All Stories Combined
Canonical Correlation	0.26	0.23	0.02	0.19	-
Significance of Function	0.14	0.15	0.85	0.28	-
Variables					
Total Situation	°	°	°	°	-
Total Personal Qualities	°	°	°	°	-
Total Role	°	°	°	°	-
Total Non Causal	°	°	°	°	-
% of Grouped Cases Correctly Classified	44	54	41	°	-

Note. All discriminant function coefficients reported are based on Wilks' Lambda. The (°) indicates that the discriminant coefficients was insignificant at the level of $p < .1$. The (+) indicates that the results was based on the responses of less than 10% of both groups. The (-) indicates that no computation was performed due to an insignificant F-level.

Table 11

Discriminant Function Analysis for Withdrawn Girls and Withdrawn Boy on the Subtypes of the Subtypes of the Main Explanation Categories

	Discriminant Functions By Story Type				
	Positive Interaction Between Friends	Negative Interaction Between Friends	Positive Interaction Between Classmates	Negative Interaction Between Classmates	All Stories Combined
Canonical Correlation	0.39	0.32	0.42	0.30	0.07
Significance of Function	0.12	0.14	0.03	0.11	0.25
Variables					
Physical Situation	°	°	°	°	°
Social Situation	°	°	°	°	°
Physical Qualities	°	°	°	°	°
Psychological Qualities	°	°	°	°	°
Friend to Object Role	°	°	0.37+	°	°
Friend to Other Role	°	°	0.37+	°	°
Classmate Role	°	°	°	°	°
Stranger Role	°	°	0.57+	°	°
Inappropriate Role	°	°	0.51+	°	°

Table 11 Continued

Variables	Discriminant Functions By Story Type				
	Positive Interaction Between Friends	Negative Interaction Between Friends	Positive Interaction Between Classmates	Negative Interaction Between Classmates	All Stories Combined
Total Non Causal	°	°	0.41	°	°
% of Grouped Cases Correctly Classified	63	59	69	55	41

Note. All discriminant function coefficients are based on Wilks' Lambda. The (°) indicates that the discriminant coefficient was insignificant at the $p < .1$ level. The (-) indicates that no computation was performed due to an insignificant F-level. The (+) indicates that the result was based on the responses of less than 10% of both groups.

of both populations used these explanation types.

An overall inspection of the results for these two groups reveals that role explanations appears to be the most discriminating variable.

Also, the only story which did appear to be effective in eliciting explanations which significantly discriminated between these two groups were stories which depict a positive interaction between classmates.

Normal Girls and Normal Boys

The analysis of the main explanation categories, shown on Table 12 illustrates that the two groups can be discriminated ($p < .04$) in terms of total personal qualities and total role. Normal girls made more use of explanations in terms of personal qualities and role than did normal boys. Explanations in terms of personal qualities appears to contribute slightly more to the discriminating power of the function. The analysis by subtypes illustrated in Table 13 and Table 1 reveals that normal girls respond in terms of psychological qualities, and friend roles, more so than do boys. Normal boys responded more in terms of situational variables and inappropriate role than do girls. Responses in terms of psychological qualities appear to contribute the most heavily to the discriminating power of the function; whereas explanations in terms of situation appears to contribute the least.

Several significant discriminations occur to the individual stories. In response to stories which depict a positive interaction

Table 12

Discriminant Function Analysis for Normal Girls and Normal Boys on the Main Explanation Categories

	Discriminant Functions By Story Type				
	Positive Interaction Between Friends	Negative Interaction Between Friends	Positive Interaction Between Classmates	Negative Interaction Between Classmates	All Stories Combined
Canonical Correlation	0.62	.0.29	-	0.29	0.17
Significance of Function	0.01	0.09	-	0.20	0.04
Variables					
Total Situation	°	°	-	°	°
Total Personal Qualities	1.00	0.88	-	°	1.10
Total Role	°	0.88	-	°	0.65
Total Non Causal	°		-	°	°
% of Grouped Cases Correctly Classified	56	63	-	°	57

Note. All discriminant function coefficients are based on Wilks' Lambda. The (°) indicates that the discriminant coefficient was insignificant at the level of $p < .1$. The (-) indicates that no computation was performed due to an insignificant F-level.

Table 13

Discriminant Function Analysis for Normal Girls and Normal Boys on the Subtypes of the Main Explanation Categories

	Discriminant Functions By Story Type				
	Positive Interaction Between Friends	Negative Interaction Between Friends	Positive Interaction Between Classmates	Negative Interaction Between Classmates	All Stories Combined
Canonical Correlation	0.36	0.38	0.48	0.37	0.33
Significance of Function	0.10	0.03	0.01	0.16	0.01
Variables					
Physical Situation	°	°	°	°	-0.26+
Social Situation	°	49	°	°	0.22+
Physical Qualities	°	°	°	°	°
Psychological Qualities	°	-0.69	-0.89	°	-0.91
Friend to Object Role	°	°	°	°	-0.46
Friend to Other Role	°	-0.63	-0.31+	°	-0.65+
Classmates Role	°	°	-0.70+	°	0.29+
Stranger Role	°	°	-1.05+	°	°
Inappropriate Role	°	°	°	°	0.20+

Table13 Continued

	Discriminant Functions By Story Type				
	Positive Interaction Between Friends	Negative Interaction Between Friends	Positive Interaction Between Classmates	Negative Interaction Between Classmates	All Stories Combined
Variables					
Total Non Causal	°	°	.62+	°	°
% of Grouped Cases Correctly Classified	68	66	70	°	61

Note. All discriminant function coefficients are based on Wilks' Lambda. The (°) indicates that the discriminant coefficient was insignificant at the level of $p < .1$. The (+) indicates that the result was based on the responses of less than 10% of both groups.

between friends, the analysis of the main explanation categories illustrates that the two groups can be significantly discriminated ($p < .01$) on the basis of explanations made in terms of personal qualities. Normal girls use this type of explanation more so than do normal boys.

In response to stories which depict a negative interaction between friends, a trend ($p < .09$) exists for the discrimination on the basis of explanations made in terms of personal qualities and role. Normal girls give more of both types of explanations than do normal boys. The analysis of the subtypes reveals that the variables which discriminate the most ($p < .03$) are explanations in terms of social situation variables, psychological variables and friendship roles. All discriminating variables appear to contribute approximately equally to the discriminating power of the function. Boys use situational variables more, whereas girls use personal qualities and friend roles more.

In addition, in response to stories which depict a positive interaction between classmates, discriminations ($p < .01$) were found in terms of psychological qualities, friend classmate, and stranger roles and non-causal events. In this analysis, friendship roles appears to contribute the least to the discriminatory power of the function. Girls respond with more epxlanations in terms of psychological qualities, friend, classmate and stranger roles and less with non-causal explanations than do boys.

Overall inspection indicates that explanations in terms of per-

sonal qualities contribute the most towards the discriminating power of the function, whereas explanations in terms of situation appears to contribute the least.

Also, the only stories which did not elicit explanations which discriminated between the two groups were stories which depict a negative interaction between friends.

In summary, it appears that withdrawn girls were distinguished from normal girls in their responses to all the stories combined by their greater use of explanations in terms of situational variables and by their lesser use of explanations in terms of psychological variables and friend roles. This patter appeared in response to three of the four stories.

Withdrawn boys could be distinguished from normal boys by their greater use of explanations in terms of situation, personal qualities and role variables, but only in response to stories which depict a positive interaction between classmates.

On the whole, withdrawn boys showed little difference from withdrawn girls except for their slightly greater use of explanations made in terms of certain roles and their lesser use of explanations in terms of non-causal events. This discrimination occured only in response to stories which depict a positive interaction between classmates.

Normal girls could be discriminated from normal boys for all stories combined by their greater use of explanations in terms of personal qualities and role. This pattern was elicited in response to most of the stories.

Discrimination by Affective Tone Used

Table 14 illustrates that for all stories combined the use of a positive tone discriminated significantly, ($p < .01$) between withdrawn and normal children. Observation of Table 1 , reveals that normal children utilize a positive tone in their explanation more so than do withdrawn children.

Table 14 also illustrates that the use of a positive tone discriminates ($p < .01$) between the two groups on stories which depict a negative interaction between classmates. Again the explanations of normal children is characterized by this variable, more so than those of withdrawn children.

Withdrawn Girls and Normal Girls

Table 10 does not report any item which significantly discriminates between the two groups on all stories. However, the two groups may be discriminated by the affective tone of the explanations in response to several of the stories.

In response to stories which depict a positive interaction between friends, the use of a neutral tone significantly discriminated between the two groups, ($p < .02$). Normal girls used this type of tone more so than did withdrawn girls.

In response to stories which depict a positive interaction between friends, there was a trend ($p < .07$) for the use of a positive tone to discriminate among the two groups. Normal girls used this type of tone more so than did withdrawn girls.

In response to stories which depict a negative interaction be-

Table 14

Discriminative Function Analysis for Withdrawn and Normal Children on the Affective Tone Categories

	Discriminant Functions By Story Type				
	Positive Interaction Between Friends	Negative Interaction Between Friends	Positive Interaction Between Classmates	Negative Interaction Between Classmates	All Stories Combined
Canonical Correlation	0.06	-	0.13	0.44	0.15
Significance of Function	0.53	-	0.15	0.001	0.001
Variables					
Positive Tone	°	-	°	1.00+	1.00
Negative Tone	°	-	°	°	°
Neutral Tone	°	-	°	°	°
% of Grouped Cases Correctly Classified	47	-	60	56	53

Note. All discriminant function coefficients are based on Wilks' Lambda. The (°) indicates that the discriminant coefficient was insignificant at the $p < .1$ level. The (-) indicates that no computation was performed due to an insignificant F-level. The (+) indicates that the result was based on the responses of less than 10% of both groups.

Table 15

Discriminant Function Analysis for Withdrawn Girls and Normal Girls on the Affective Tone Categories

	Discriminant Functions By Story Type				
	Positive Interaction Between Friends	Negative Interaction Between Friends	Positive Interaction Between Classmates	Negative Interaction Between Classmates	All Stories Combined
Canonical Correlation	0.27	0.11	0.21	0.02	0.12
Significance of Function	0.02	0.36	0.07	0.01	0.13
Variables					
Positive Tone	°	°	1.00	1.00	°
Negative Tone	°	°	°	°	°
Neutral Tone	1.00	°	°	°	°
% of Grouped Cases Correctly Classified	51	57	64	59	53

Note. All discriminant function coefficients are based on Wilks' Lambda. The (°) indicates that the discriminant coefficient was insignificant at the $p < .1$ level.

tween classmates, the use of a positive tone significantly discriminated among the two groups ($p < .01$). Normal girls tended to use this type of affective tone more so than did withdrawn girls.

Normal Boys and Withdrawn Boys

Observation of Table 16 does not reveal any affective variable which significantly discriminates among the groups for neither all of the stories combined nor for any of the stories separately.

Withdrawn Girls and Withdrawn Boys

None of the affective tone items appears to discriminate between the two groups for all the stories combined. However, certain of these items do appear to significantly discriminate between the groups for certain of the separate stories (see Table 17).

In response to stories which depict a positive interaction between friends, the use of a positive affective tone appears to significantly discriminate between the two groups ($p < .02$). Withdrawn girls use more of this type of tone than do withdrawn boys.

In response to stories which depict a negative interaction between friends, the use of a negative tone appears to discriminate between the two groups, ($p < .03$). Withdrawn girls use more of this type of tone than do withdrawn boys.

Normal Boys and Normal Girls

As shown in Table 18, for all stories combined, the use of a positive affective tone appears to significantly discriminate between the two groups ($p < .01$). Normal girls made more of this type of

Table 16

Discriminant Function Analysis for Withdrawn and Normal Boys on Affective Tone Categories

	Discriminant Functions By Story Type				
	Positive Interaction Between Friends	Negative Interaction Between Friends	Positive Interaction Between Classmates	Negative Interaction Between Classmates	All Stories Combined
Canonical Correlation	0.06	-	-	-	-
Significance of Function	0.67	-	-	-	-
Variables					
Positive Tone	°	-	-	-	-
Negative Tone	°	-	-	-	-
Neutral Tone	°	-	-	-	-
% of Grouped Cases Correctly Classified	55	-	-	-	-

Note. All discriminant function coefficients are based on Wilks' Lambda. The (°) indicates that the discriminant coefficient was insignificant at the $p < .01$ level. The (-) indicates that no computation was performed due to an insignificant F-level.

Table 17

Discriminative Function Analysis for Withdrawn Girls

And Withdrawn Boys on Affective Tone Categories

	Discriminant Functions By Story Type				
	Positive Interaction Between Friends	Negative Interaction Between Friends	Positive Interaction Between Classmates	Negative Interaction Between Classmates	All Stories Combined
Canonical Correlation	0.28	0.27	-	0.20	-
Significance of Function	0.02	0.03	-	0.25	-
Variables					
Positive Tone	1.00	°	-	°	°
Negative Tone	°	1.00	-	°	°
Neutral Tone	°	°	-	°	°
% of Grouped Cases Correctly Classified	50	56	-	73	°

Note. All discriminative function coefficients are based on Wilks' Lambda. The (°) indicates that the discriminant coefficient was insignificant at the $p < .1$ level. The (-) indicates that no computation was performed due to an insignificant F-level.

Table 18

Discriminant Function Analysis for Normal Girls and Normal Boys on the Affective Tone Categories

	Discriminant Functions By Story Type				
	Positive Interaction Between Friends	Negative Interaction Between Friends	Positive Interaction Between Classmates	Negative Interaction Between Classmates	All Stories Combined
Canonical Correlation	-	0.08	0.30	-	0.62
Significance of Function	-	0.55	0.08	-	0.01
Variables					
Positive Tone	-	°	0.94	-	1.00
Negative Tone	-	°	0.60	-	°
Neutral Tone	-	°	°	-	°
% of Grouped Cases Correctly Classified	-	47	61	-	56

Note. All discriminant function coefficients are based on Wilks' Lambda. The (°) indicates that the discriminant coefficient was insignificant at the $p < .1$ level. The (-) indicates that no computation was performed due to an insignificant F-level.

affective tone than did normal boys.

In response to stories which depict a positive interaction between classmates, there exists a trend ($p < .07$) for the use of a positive tone to be slightly more important in its contribution to the discriminating power of the function. Normal girls made more use of these types of affective tones than did normal boys.

In summary, it appears that normal-children can be distinguished from withdrawn children by their greater use of a positive affective tone. Most of this difference, however, is due to the tendency of normal girls to use more positive affective tones in their explanations than withdrawn girls. Withdrawn boys and normal boys do not appear to differ in their use of affective tone. An overall inspection of the results seems to indicate that the use of a positive tone discriminates more effectively than does the use of a negative or neutral tone.

CHAPTER IV

DISCUSSION

The basic questions of this exploratory study were the following: Do withdrawn children differ from normal children in (1) the kind of explanations made in terms of both explanatory construct and affective tone; (2) the extent to which the type of explanation construct used is affected by whether the stimulus person is presented as a friend or classmate; and (3) the extent to which the type of explanation construct used is affected by whether the situation depicts a positive or negative social interaction? Each of these questions will now be discussed in turn.

Type of Explanatory Category Used by Sex

Normal Girls and Withdrawn Girls. In view of the sex differences noted, the discussion of the results will be made according to the sex of the subjects. Normal girls make more use of explanations in terms of psychological qualities and friendship roles, and less use of explanations in terms of physical situation, and physical qualities. Thus the hypothesis was supported that withdrawn girls differ from normal girls in the type of explanatory category used. While this finding is of interest by itself, it is also suggestive of certain personality differences between the two groups. That withdrawn girls use more explanations in terms of physical qualities and less explanations in terms of psychological qualities suggests

that withdrawn girls tend to concentrate upon the more superficial aspects of social interactions. Whether or not this type of orientation is the result of unusual social experiences, e.g., limited social contact, it may be speculated that such an orientation impedes a more meaningful personal encounter and hinders the formation of deeper friendships. The speculation that withdrawn girls tend to concentrate upon the more superficial aspects of social interactions supports previous research comparing withdrawn and normal children for both sexes combined. La Gaipa and Wood (1973) reported that withdrawn children value empathy in friendship less so than do normal children. Thus it appears that withdrawn children, especially girls, do not concentrate, do not recognize and/or do not respond to the "deeper", more psychological aspects of social interactions.

The use of psychological constructs also has developmental implications. Flapan (1968) and Whiteman (1977) have both reported that constructs in terms of psychological variables characterize older children and adults, whereas constructs in terms of physical variables characterize younger children. The findings in this study therefore could suggest that withdrawn girls are developmentally behind normal girls in this aspect of social cognition.

In support of this suggestion of developmental differences between withdrawn and normal girls, it has been reported by Flapan (1968) and Whiteman (1977) that explanations in terms of situational variables characterize the younger child. Whether this apparent developmental difference between normal and withdrawn girls is due to peculiar early social experiences (e.g., limited social contact)

or whether this apparent developmental difference causes unsuccessful social and/or withdrawn behaviour still remains to be answered.

This suggested immaturity in withdrawn girls parallels the findings of other previous research for withdrawn children in general. In the field of free description, Yarrow and Campbell (1963) have noted that withdrawn children describe others in terms that were more vague and global than did normal children. According to Werner, vague, global perception characterizes the younger child. Also, Rothenberg (1970) reported that withdrawn children were less able to identify the emotions of an actor and were less able to infer motives for interpersonal behaviour. Spivak and Shure (1974) found that withdrawn children were inferior to normal children in cognitive problem solving abilities.

The results of this study for girls are also congruent with previous findings of lower developmental levels in social cognition for other types of socially maladapted individuals of both sexes. Moss (1974) reported a more immature quality in the performance of psychopaths on a task of impression formation. Steiner (1974) found that depressed women displayed a lower developmental level in their interpersonal problem solving styles. Goldstein (1973) found that clinic children were immature in their understanding of psychological causality. Thus the results of this and previous studies suggest that certain types of maladjusted individuals are relatively immature in their social cognitive processes.

The greater use of explanations made of in terms of friend roles by normal girls probably reflects the fact that normal girls have more friends than do withdrawn girls and thus might be more inclined from personal experience to explain social interactions by the use of that

role.

NORMAL BOYS AND WITHDRAWN BOYS. Normal boys and withdrawn boys can be distinquished by the greater usage by withdrawn boys of explanations in terms of social situation, roles and psychological qualities. This pattern of responses does not clearly suggest any developmental differences between the two groups, as explanations in terms of situation and psychological qualities characterize younger children and older children, respectively (Flapan, 1968; Whiteman, 1977) The fact that withdrawn boys respond more so than did normal boys with most of the explanation types, probably reflects their greater responsiveness and/or cooperation. Thus normal boys and withdrawn boys do not seem to differ in their types of explanations but seem to differ in the quality of their responses.

TYPE OF AFFECTIVE TONE USED?

It was found that for all stories combined, normal children, as compared to withdrawn children, provide explanations with a more positivie affective tone to them. Closer inspection of the data, however, reveals that most of this discrimination is due to the difference between withdrawn girls and normal girls. Thus the hypothesis that withdrawn children differ from normal children was supported only for the female sex. This suggests that normal girls have a more optimistic orientation than do withdrawn girls and view their world as being more friendly. Conversely, withdrawn girls have a less positive, optimistic view. These findings for the females are also congruent with previous reports for both sexes combined. Wood (1976) reports that withdrawn children expressed more themes of

distrust on TAT cards. These findings are also congruent with research dealing with other maladjusted groups. Steiner (1974) reports that depressed individuals supplied their interpretations of interpersonal events with more negative affective responses than did normal individuals. Matkom (1963) found that maladjusted individuals attribute unfavorable qualities to others more so than do adjusted individuals. Thus, the results of this and previous findings suggest that certain types of maladapted individuals conceive their social environment less than do normal individuals in positive terms. Whether this less positive orientation is the result of less positive social experiences or whether their less adaptive social behaviour is fostered by this less positive orientation, still remains to be answered.

An analysis of the effect of story type reveals that the major distinction between withdrawn and normal girls is elicited by stories which depict a negative interaction between classmates. This suggests that the major difference between normal girls is in the way they view negative social encounters. Normal girls are more likely to supply positive motives and to "see the good" in the situation. It may be speculated that this optimism perhaps is unreasonable and that it functions as a "defense" against the pain of negative social interactions.

Impact of Role and Quality of Interaction

Withdrawn Girls and Normal Girls. Most of the cues succeeded in eliciting responses that distinguish between the two groups. This suggests that withdrawn and normal girls do differ in their explana-

tions in response to certain combinations of cues. However, the pattern of explanations which emerged that discriminate between these two groups were essentially very similar regardless of the type of story. No clear cut differences were found regarding the effect of one cue when the other cue was held constant.

A major exception to this finding should be noted. In stories showing a negative interaction between classmates, normal girls made more non-causal explanations than the withdrawn girls. This suggests that, when faced with a negative interaction involving persons that are not close friends, normal girls are less inclined to make causal interpretations regarding the rejection. This possible tendency to "distort" may function as a "defence" which protects adjusted children from the potential pain of such experiences. On the other hand, withdrawn girls in having experienced rejection more frequently, may be more sensitive or concerned regarding the causal motives underlying the other's actions.

Normal Boys and Withdrawn Boys. Discriminations were made between these two groups of boys on the basis of their responses to the stories combined, i.e., when the responses were collapsed across type of story. Much of this discrimination, however, was generated by stories which depict a positive interaction between classmates. It is not readily apparent why the combined effects of a positive interaction between classmates resulted in such discriminations.

Overall Sex Differences

Although this study was not specifically concerned with sex dif-

ferences as such, some interesting findings were obtained. Few sex differences were found among withdrawn children as such. Significant sex differences were found, however, among normal children. Normal girls made greater use of explanations in terms of psychological qualities and lesser use of explanations in terms of situation. One possible interpretation is that normal girls possess a more mature level of social cognition than normal boys. This might be due to the greater physical maturity of girls of this age. These results also suggest those previously reported regarding sex differences (Brierly, 1966; Little, 1968). Little (1968) also found that males rely more on role constructs than females. Our study indicates, however, that females are more sensitive to the role of frienship than are males. It may be that sex differences regarding roles depends on the kind of role that is involved.

Limitations of Study

The results of this study indicated that withdrawn girls can be distinguished from normal girls. It is felt, however, that the distinction may have been stronger if certain limitations within the study had been avoided. One of these limiting factors was the selection of the subjects. The withdrawn children used in this study were probably not a homogeneous group as different types of children can show withdrawn behaviour for many different reasons. Also, it is even more likely that the normal children used in this study were not a homogeneous group. Stronger results such as those reported by Wood (1976) may have been obtained if a more homogeneous group such as

popular children had been used as subjects. The use of popular children as subjects may have also provided stronger results because the difference between withdrawn and popular children in amount of social contact is presumably greater than the difference between withdrawn and normal children.

Another limitation was that the coding system may have been overly complicated. Too many explanatory subcategories were used. This complex coding system was necessary as the types of explanations which would predominate were not known. As a consequence, however, the range of explanation categories was too large and many of the categories were used by less than ten percent of the population. Thus some of the results obtained were based on the responses of a very small segment of the population and should be regarded with caution. Further refinement of the coding system is recommended in future research. Furthermore, the discriminative analysis procedure was not entirely suited for the data. However, after a comparison of several other types of analyses, discriminative analysis proved to be the optimal choice.

Implications

The aim of this explanatory study was to determine whether withdrawn and normal children could be distinguished on the basis of their explanations. Further research in this area should explore more specific questions. Various possibilities exist. This type of research may be approached from a clinical orientation. Different clinical groups, (e.g., aggressive versus normal children), may be compared on their explanations to determine whether different groups

may be distinguished. If, in fact, different clinical groups are distinguishable, a refined test of this sort may serve as a quick mental health screening device. Also, as this study has suggested that normal children differ from withdrawn children in their use of defense mechanisms further exploration of this area using different clinical groups may be warranted.

This type of research may also be approached from a developmental orientation in order to determine more precisely the interaction between social experience and interpersonal perception. Children known to have little social experience e.g., institutionalized children, physically handicapped children, may be compared with children with extensive social experience on the developmental quality of their responses.

Also, this type of study could be approached from a social-psychological orientation. Different groups, e.g., different nationalities, could be compared on their interpretation of social events.

Studies of all the types mentioned above would hopefully help in understanding what others are thinking, how others interpret the behaviour of others and would hopefully help unlock the puzzle of human behaviour.

BEHAVIOURAL DESCRIPTION FORM

Below are listed various descriptions of children. Read each description. Identify those children that best fit each description by circling the namer 1, 2, 3, 4 or 5 on the child's test form under the name.

Circle "1" if the child fits the "popular" description.

Circle "2" if the child fits the "aggressive" description.

Circle "3" if the child fits the "withdrawn" description.

Circle "4A" if the child is about an equal combination of Popular and Aggressive.

Circle "4B" is the child is about an equal combination of Aggressive and Withdrawn.

Circle "5" if the child does not fit into any of the categories listed above, i.e., the child is average or normal.

1. POPULAR. Children who are good leaders in several things; cheerful, jolly, and good natured; show consideration and understanding for others; work for the good of their class, their team and playmates.

2. AGGRESSIVES. Children who quarrel and get mad easily, are descriptive, annoy and bother others; are restless and find it hard to sit still; are uncooperative and want things their own way.

3. WITHDRAWN. Children who are too shy to make friends easily; who never seem to have a good time with other children; and would rather stay by themselves; get embarrassed easily; are self conscious; and do not appear to be noticed by their classmates.

4A. MIXTURE: POPULAR & AGGRESSIVE

4B. MIXTURE: AGGRESSIVE AND WITHDRAWN

5. OTHER

INSTRUCTIONS TO THE TEACHER

This study is concerned with the causal explanation of interpersonal events given by socially withdrawn children. The procedure involves asking children to respond to eight brief stories. In handing out the test material, please note that the forms are marked Males and Females. The only difference between the forms is the names of the characters.

Read out the below instructions to the class.

"On these papers are written some stories. Read each story carefully. Answer the question at the end of each story as best you can. Write down answers for all the stories. There are no right or wrong answers. Write down what you think.

Before you begin, write down your first name and the first initial of your last name. For example, if your name is Jerry Brown, write down only Jerry B.

You have 30 minutes to finish these stories. Are there any questions."

Feel free to reduce any tensions and to maintain a relaxed atmosphere. Walk around occasionally to make sure that the students are answering the questions, and that they understand the instructions. Make sure that their names are on the sheets. It is permissible for you to answer any questions.

The "test" should take 30 minutes. If there are some slower children, you may give them a few extra minutes if you wish.

When all the tests have been collected, please circle under each child's name, the appropriate digit from 1 to 5. (See the Behavioural Description Form). Generally, only two to three children out of a classroom of 30 or so, fit into each of the categories.

If you have any additional comments about a specific child, please feel free to write them on the child's form, e.g., if the child is very low in intelligence or has a serious learning problem. If an aggressive or withdrawn child has such symptoms, he or she will not be included in the analysis. Any additional comments about what happened in class would be welcomed.

Females

First Name _____ 1st Initial _____

Instructions: Write only your first name and the 1st initial of your last name. For example, if your name is Harriet Brown, write only Harriet B. Do not write anything in the box below.

1	2	3	4	5

Read each of the eight stories carefully. Answer the question at the end of each story as best you can. Write down answers to all the stories. There are no right or wrong answers. Write down what you think.

.....

1) Ann and Jane were best friends. One day it snowed very hard and Ann had to shovel the snow away from her driveway. Jane offered to help. Why do you think Jane offered to help?

_____

_____

_____

_____

2) Laura and Julie were classmates but did not know each other too well. One day their class had elections for class president. Laura nominated Julie for class president. Why do you think Laura nominated Julie?

_____

_____

_____

_____

3) Rose and Lynne were best friends. They always walked to school together. One day Rose stopped calling on Lynne as usual. Why do you think Rose did not call on Lynne?

4) Molly and Jennie were best friends. One day in the playground another girl called Jennie a "lying cheater". Molly stood up for Jennie and said that it wasn't true. Why do you think Molly stood up for Jennie?

5) Diane and Mary were classmates but did not know each other too well. One day the teacher gave an arithmetic test and Diane failed. That evening Mary offered to help Diane with arithmetic. Why do you think Mary offered to help Diane with arithmetic?

6) Lucy and Karen were best friends. One day Lucy had a party. She did not invite Karen. Why do you think Lucy did not invite Karen?

7) Eva and Gloria were classmates but did not know each other too well. One day Eva called Gloria a "stinking pig." Why do you think Eva called Gloria that name?

8) Sue and Jill were classmates but did not know each other too well. One day they were both invited to a bowling party by another girl. Sue ignored Jill for the whole afternoon. Why do you think Sue ignored Jill?

Males

Instructions: Write only your first name and the 1st initial of your last name. For example, if your name is Jerry Brown, write only Jerry B. Do not write anything in the box below.

First Name _____ 1st Initial _____

1	2	3	4	5

Read each of the eight stories carefully. Answer the question at the end of each story as best you can. Write down answers to all the stories. There are no right or wrong answers. Write down what you think.

.....

1) Bob and Jim were best friends. One day it snowed very hard and Bob had to shovel the snow away from his driveway. Jim offered to help. Why do you think Jim offered to help?

_____

_____

_____

_____

2) Ron and John were classmates but did not know each other too well. One day their class had elections for class president. Ron nominated John for class president. Why do you think Ron nominated John?

_____

_____

_____

_____

3) Dan and Jack were best friends. They always walked to school together. One day Dan stopped calling on Jack as usual. Why do you think Dan did not call on Jack?

4) Alan and Joe were best friends. One day in the playground another boy called Joe a "lying cheater". Alan stood up for Joe and said that it wasn't true. Why do you think Alan stood up for Joe?

5) Pete and Jeff were classmates but did not know each other too well. One day the teacher gave an arithmetic test and Pete failed. That evening Jeff ordered to help Pete with arithmetic. Why do you think Jeff offered to help Pete with arithmetic?

6) Karl and Bruce were best friends. One day Karl had a party. He did not invite Bruce. Why do you think Karl did not invite Bruce?

7) Gary and Wayne were classmates but did not know each other too well. One day Gary called Wayne a "stinking pig." Why do you think Gary called Wayne that name?

8) Evan and Keith were classmates but did not know each other too well. One day they were both invited to a bowling party by another boy. Evan ignored Keith for the whole afternoon. Why do you think Evan ignored Keith?

APPENDIX C

CODING SYSTEM FOR EXPLANATION TYPES

Causal Explanations

A causal explanation is one which ascribes some aspect of the situation and/or the character's disposition and/or the character's role as being the provoking reason for the acting character's behaviour. Causal explanations reflect the conventional laws of logic and cause and effect. Several types of causal explanations are to be distinguished. These types are described below.

Situational Explanations

A situational explanation is one which ascribes the cause of the behaviour as being due to some aspect of the setting and/or some pressure generated by the setting. In all situational explanations the person is reacting in terms of the demands of the situation rather than in terms of some internal or external quality or role. The parameters of the situation include the physical, temporal and social environment. A description of each subtype follows.

Physical Situation Explanations. These are explanations which locate the cause of the behaviour to the physical or temporal demands of the situation. Some types of demands include: physical obstacles such as floods, snowstorms etc., physical limitations of supplies, etc.

Example: He didn't call on his friend because he moved away.

He helped John shovel the snow because the snow was

so heavy.

He didn't invite his friend because he had no more invitation cards left.

He didn't call on his friend because he was in a hurry.

Social Situation Explanations Social situation explanations are explanations which locate the cause of the behaviour to the social aspects or demands of the situation. Social pressure and demands include parental pressure, peer group pressure and social customs, values and norms.

Examples: He didn't invite Harry to the party because his mother didn't like Harry.

She called Jill a name because everyone else did.

John didn't invite Keith to his party because it was a party only for relatives.

Personal Qualities Explanations.

These are explanations which locate the cause of the behaviour onto some characteristic of the people involved in the situation. The explanation can be in terms of physical or dispositional characteristics.

Physical Qualities Explanations These are explanations in which the cause of the acting character's behaviour is ascribed to the physical appearance, body build or age of the characters.

Example: He stood up for Jack because he was stronger.

She called Ellen a pig because she looked like one.

Psychological Qualities Explanations. These are explanations which locate the cause of the behaviour onto personality factors within the person. The types of psychological explanations include traits and abilities, reactive behaviour, affective states and instrumental explanations. A description of each type follows.

Traits and Abilities These are explanations which attribute the cause of the behaviour to relatively enduring dispositions or qualities which characterize the person in a wide variety of circumstances and over a long period of time.

Example: She nominated Anne because of the way she acts.

She invited Mary to her party because Mary is a nice girl.

She defended her friend against Ellen's name-calling because the names Ellen called her weren't true.

Reactive Explanations Reactive explanations ascribe the cause of the behaviour as being due to some provoking stimulus. The behaviour is seen to be a reaction to another character's behaviour which took place in the immediate past. The behaviour is not seen as being pre-planned.

Example: She didn't talk to Edie because they had a fight.

She ignored Jill because she thought that Jill was saying bad things about her.

Affective Explanations. This category included explanations which ascribe the cause of the behaviour to some provoking emotional state. The behaviour of the acting character is seen to be a reaction to this emotional state.

Example: She ignored her because she was in a bad mood.

She helped her because she liked her.

Instrumental Explanations. Instrumental explanations are explanations which indicate that the behaviour in question is necessary or instrumental to the attainment of some desired subjective or objective state. Also included in this category are explanations which attribute the cause of the behaviour to the attempted or fulfilled gratification of a need. All behaviour in this category is goal-directed. This category differs from "reactive explanations" in that instrumental explanations refer to the fulfillment of goals and implies some degree of planning rather than being a direct reaction to the situation. Several types of instrumental explanations are to be distinquished. These types are described below.

Desire to form an interpersonal relationship towards the object of the story: The name of this type of explanation is self-explanatory.

Example: She invited Mary over because she wanted to be friends with her.

Also included in this subcategory are behaviours motivated by fear of loss of friendship.

Example: She called on her because she didn't want to lose her friend.

Desire to form a relationship to persons other than the object of the story: The title of this type of explanation is self-explanatory.

Example: She didn't invite her to the party because she wanted to make some new friends.

Desire to affect people in certain ways: The name of this type of explanation is self-explanatory.

Example: John called Jim a name because he wanted to show off.

Social Exchange: These are explanations in which the behaviour is seen as an attempt to trade a service rendered for some material gain or for some future reciprocal service.

Example: He helped shovel the snow because he thought he would get some money.

He helped her with arithmetic so maybe she will help him with physics.

Also included in this category are explanations which see the behaviour as being due to an attempt to repay some reciprocal behaviour.

Example: She defended Jerry because Jerry help him once.

Desire to attain, induce or avoid affective feelings in self or others: The name of this type of explanation is

self-evident.

Example: She defended Sue because she didn't want her feelings to be hurt.
She didn't invite Ricky to the party because she wanted to make him feel jealous.

Altruistic Motives: These are explanations which describe helping behaviour caused primarily by unselfish desires and without reference to any benefit expected for the service rendered.

Example: Harry helped Jack because he wanted him to pass.

Other: Included in this category are explanations which describe the behaviour as being motivated by the desire to attain a goal, but which do not fit into any of the above categories.

Example: Tim helped Phil shovel the snow to get it done faster so that they could play afterwards.
Jill didn't invite Chris to the party because she thought that Chris would fight with Mary.

Role Explanations.

These are explanations which attribute the cause of the character's

behaviour to social roles. Five types of roles are to be distinquished and are described below.

Friend to Object These are role explanations in which the cause of the main character's behaviour is seen as being due to the fact that he is friends or not friends with the main character (or object) in the story.

Example: Jane offered to help Mary because they are friends.
Kim didn't play with Sally, because she was not her friend.

Friend to Other. These are role explanations in which the cause of the acting character's behaviour is seen as being due to the fact that he is a friend of someone other than the other main character in the story.

Example: Jane didn't play with Mary because she was playing with her other friends.

Classmate. These are role explanations in which the behaviour in question is seen as occuring because the acting character is a classmate of the object of his behaviour.

Example: John helped Lucy because they were classmates.

Inappropriate Role. These are role explanations in which the explainer supplies the story character with a role other than that designated in the story. An example of an inappropriate role explanation would occur when the subject writes that the characters were best friends, whereas the vignette designates them as being classmates.

Non-Intentional Explanations

These are explanations in which the behaviour of the acting character is seen as having a cause. However, the cause of the behaviour is seen as being accidental, non-deliberate and beyond the control of the actor.

Example: He didn't invite his friend to the party because he forgot.

He didn't call on his friend on the way to school because he slept in late.

Non-Causal Explanations

These are explanations which do not causally relate two events and/or are explanations which are bizarre and which do not make sense. Several types of explanations are designated as non-causal and will be described below.

Descriptive

These are statements which merely describe the story and which do not attempt to elucidate a causal sequence. These statements usually do not contain conjunctives such as "because" and "so that" etc. As an example, in response to the question, "Why did Mary help?" a non-causal explanation would be "She offered to help".

Denial

These are statements which deny the truth of a premise stated in the story. For example, in a story in which it is stated that

the character had a party, an example of a denial statement would be the following: "She did not have a party".

Note that when a role is denied, it is scored "Denial", unless another role is substituted for the original role. When a substitution occurs, the statement is scored "inappropriate role".

Opinion

These are statements which do not attempt to elucidate a causal relationship between events but which merely state an opinion or an evaluation of the situation.

Example: It is wrong to call names.

I would stick up for my best friend, if it were me.

Bizarre

These are statements which do not make sense or are inappropriate in the context of the question being asked. As an example, in response to the question: "Why did Bob ignore Jack?" an bizarre response would be "Because he thought that Jack was nice."

A tree describing the relationship between the explanation types is illustrated in Diagram 1, page .

RULES FOR CODING

Score separately each part of a sentence that is a separate explanatory statement.

Example: "Mary offered to help because she liked to help people and because she wanted to make another friend". This statement has two explanatory statements: 1) "because she wanted to help" and 2) "because she wanted to make another friend".

If two or more explanatory statements within a sentence are of the same sub-category, e.g. are both reactive explanations, and if they mean essentially the same thing, only one score is given.

Example: "Because she was nice and kind." These are both trait statements and mean essentially the same thing.

If two are more explanatory statements within a sentence are of the same sub-category, e.g. are both reactive explanations, and if they have essentially different meanings, two scores are given.

Example: " Mary helped Sue because Mary was nice or maybe because Sue was very bad at arithmetic". These are both trait statements but have different meanings.

If two or more statements within one sentence mean essentially the same thing but belong to different sub-categories a separate score is given to each of the statements.

Example: "She ignored her because she was mean and because she insulted her." In this case the first part "because she was mean" is scored as Trait and the second part "because he insulted her" is scored as Reactive.

If two or more sentences are of the same sub-category and mean almost the same thing, only one score is given.

Example: "She defended her because they were best friends. Best friends should help each other." These two sentences are given one single score - Role.

If two or more sentences are of different sub-categories and have similar meanings, score each sentence separately.

Example: "Sally did not invite Jane because they were not really friends. Sally did not like Jane." In the first sentence the score is Role. In the second sentence the score is Affective.

If two or more sentences are of different sub-categories and have essentially different meanings they are classified as separate reasons and are scored separately.

Example: "She didn't call on her friend because she forgot.

Maybe they had a fight." The score for the first sentence is Non-Intentional. The score for the second sentence is Reactive.

APPENDIX D

CODING SYSTEM FOR AFFECTIVE TONE

Responses will be scored positive, negative or neutral in affective tone. Only the following categories of responses will be coded according to this system: trait; reactive; affective; desire to form relationship towards object; desire to diminish relationship towards object and social exchange.

Positive Affective Tone

These are responses in which there is mention of an obvious positive quality, a positive regard towards the story character, the occurrence of a positive event and/or the desire to become friends with another. Examples of these types of responses will be illustrated in more detail below.

Examples of Positive Traits: "was nice", "was kind"

Examples of Positive Reactive Explanations: "Sue invited Mary to the party because they had a good time together at the movies".

Examples of Positive Affective Explanations: "She liked her", "She admired her." "Because she cared for her."

Examples of Positive Social Exchange Explanations: Mary helped Jean because Jean helped Mary once before."

Examples of Positive Desire to Form a Relationship Explanations: "Because she wanted to get to know her better".

Negative Affective Tone

These are responses in which there is mention of an obvious negative trait, a negative regard towards a story character, the occurrence of a negative event and/or the desire to end a relationship with another. Examples of these types of responses will be illustrated in more detail below.

Examples of Negative Traits: "Because he was mean." "Because he was a stinking pig." "Because he was selfish."

Examples of Negative Reactive Explanations: "Because they had a quarrel.", "Because he insulted Jack.", "Because Jack was talking behind his back."

Examples of Negative Affective Explanations: "did not like him", "because she bored him", "because her feelings were hurt"

Examples of Negative Social Exchange Explanations: "Mary spread rumours about Sue because she wanted revenge." "Jill didn't invite Gary to her party because she wanted to give him a taste of his own medicine".

Examples of Desire to Diminish a Relationship Explanation: "He didn't invite him because he didn't want to get to know him.", "Because he didn't want to be his friend anymore."

Neutral Affective Tone

Responses which are coded as: trait; reactive; affective; social exchange or desire to form or diminish relationship towards object; but which are neither positive or negative in affective tone will be coded as Neutral.

Examples of Neutral Explanations: "Because he felt sorry for him.", "Because Jack always thought that he was superiour".

RULES FOR CODING

Altruistic traits such as "was Helpful" are not coded as Traits according to the Coding System for Explanation Types. Therefore, such traits are not coded for affective tone.

Affective responses which compare a character's feelings for one character against another character are not scored. As an example, the following is not scored: "Joan didn't play with Barb, because she liked Kathy better."

APPENDIX E

INTER-RATING RELIABILITY OF THE CODING SYSTEM FOR EXPLANATION CATEGORIES AND AFFECTIVE TONE CATEGORIES

Explanation Category	Percent Agreement	Number of Statements Coded
Situation	100	4
Personal Qualities	92	49
Role	100	17
Non Causal	90	10
Mean % of Agreement = 95		

Affective Tone Category	Percent Agreement	Number of Statements Coded
Positive Tone	88	17
Negative Tone	83	24
Neutral Tone	97	60
Mean % of Agreement = 88		

APPENDIX F

PERCENTAGE OF CHILDREN USING EACH EXPLANATION TYPE CATEGORY AND EACH AFFECTIVE TONE CATEGORY FOR ALL STORIES COMBINED

Explanation Categories	Withdrawn Girls (N=43)	Withdrawn Boys (N=27)	Normal Girls (N=33)	Normal Boys (N=26)
Physical Situation	13%	13%	8%	7%
Social Situation	4	4	5	8
Total Situation	16	15	12	15
Physical Qualities	6	5	2	4
Total Psychological Qualities	83	75	91	83
Total Personal Qualities	85	77	91	84
Friend to Object Role	25	24	22	21
Friend to Other Role	2	5	7	1
Friend to Classmate Role	4	4	5	1
Friend to Stranger Role	3	7	2	3
Friend to Inappropriate Role	5	1	1	3
Total Role	33	39	30	25
Non Causal	10	9	10	10
Affective Tone Category				
Positive Tone	27	24	30	27
Negative Tone	38	33	38	34
Neutral Tone	32	33	34	31

PERCENTAGE OF CHILDREN USING EACH EXPLANATION TYPE CATEGORY AND EACH AFFECTIVE TONE CATEGORY FOR STORIES WHICH DEPICT A POSITIVE INTERACTION BETWEEN FRIENDS

Explanation Category	Withdrawn Girls (N=43)	Withdrawn Boys (N=27)	Normal Girls (N=33)	Normal Boys (N=28)
Physical Situation	12	4	6	4
Social Situation	0	0	3	0
Total Situation	12	4	9	4
Physical Qualities	9	15	3	8
Total Psychological Qualities	70	57	79	69
Total Personal Qualities	72	74	79	69
Friend to Object Role	93	85	88	85
Friend to Other Role	2	0	0	0
Classmate Role	0	0	3	0
Stranger Role	0	0	0	0
Inappropriate Role	0	0	0	4
Total Role	79	85	76	85
Total Non Causal	5	7	3	0
Affective Tone Category				
Positive Tone	26	11	18	19
Negative Tone	2	4	0	0
Neutral Tone	51	56	54	61

PERCENTAGE OF CHILDREN USING EACH EXPLANATION TYPE CATEGORY AND EACH AFFECTIVE TONE CATEGORY FOR STORIES WHICH DEPICT A NEGATIVE INTERACTION BETWEEN FRIENDS

Explanation Categories	Withdrawn Girls (N=43)	Withdrawn Boys (N=27)	Normal Girls (N=33)	Normal Boys (N=26)
Physical Situation	39	44	28	23
Social Situation	7	15	6	23
Total Situation	43	52	31	42
Physical Qualities	9	0	0	0
Total Psychological Qualities	75	63	87	63
Total Personal Qualities	77	63	87	63
Friend to Object Role	7	4	0	0
Friend to Other Role	7	11	16	4
Classmate Role	0	0	0	0
Stranger Role	0	0	0	0
Inappropriate Role	0	0	0	0
Total Role	14	19	16	4
Non Causal	25	26		
Affective Tone Category				
Positive Tone	2	0	6	0
Negative Tone	59	52	66	54
Neutral Tone	18	18	22	11

PERCENTAGE OF CHILDREN USING EACH EXPLANATION TYPE CATEGORY AND EACH AFFECTIVE TONE CATEGORY FOR STORIES WHICH DEPICT A POSITIVE INTERACTION BETWEEN CHILDREN

Explanation Categories	Withdrawn Girls (N=43)	Withdrawn Boys (N=27)	Normal Girls (N=33)	Normal Boys (N=26)
Physical Situation	0	0	0	0
Social Situation	0	0	0	0
Total Situation	0	0	0	0
Physical Qualities	2	0	3	4
Total Psychological Qualities	93	82	97	85
Total Personal Qualities	93	82	97	85
Friend to Object Role	0	0	0	0
Friend to Other Role	0	4	3	0
Classmate Role	9	15	9	4
Stranger Role	2	12	3	0
Inappropriate Role	19	0	3	4
Total Role	29	31	15	8
Non Causal	5	0	3	4
Affective Tone Category				
Positive Tone	21	81	18	85
Negative Tone	2	4	3	0
Neutral Tone	21	31	21	27

PERCENTAGE OF CHILDREN USING EACH EXPLANATION TYPE CATEGORY AND EACH AFFECTIVE TONE CATEGORY FOR STORIES WHICH DEPICT A NEGATIVE INTERACTION BETWEEN CLASSMATES

Explanation Categories	Withdrawn Girls (N=43)	Withdrawn Boys (N=27)	Normal Girls (N=33)	Normal Boys (N=26)
Physical Situation	2	4	0	0
Social Situation	3	0	9	12
Total Situation	4	4	9	12
Physical Qualities	2	4	3	4
Total Psychological Qualities	95	81	63	96
Total Personal Qualities	95	81	63	96
Friend to Object Role	0	4	0	0
Friend to Other Role	0	4	9	0
Classmate Role	7	0	0	0
Stranger Role	19	15	6	12
Inappropriate Role	2	0	0	4
Total Role	22	19	12	4
Non Causal	7	4	15	12
Affective Tone Category				
Positive Tone	0	4	6	4
Negative Tone	88	63	85	84
Neutral Tone	27	63	39	24

APPENDIX G

DISCRIMINANT FUNCTION ANALYSIS FOR WITHDRAWN CHILDREN AND NORMAL CHILDREN ON THE SUBTYPES OF THE MAIN EXPLANATION CATEGORIES

Variables	Story Type: Positive Interaction Between Friends	Negative Interaction Between Friends	Positive Interaction Between Friends	Negative Interaction Between Friends	All Stories Combined
	Canonical Correcting Significance of Further Discriminative Coefficients				
	0.28	0.22	0.22	0.32	0.16
	.07	0.18	0.11	0.04	0.07
Physical Situation	-0.39+	o	o	-0.48+	-0.56
Social Situation	o	o	o	o	-0.29+
Physical Qualities	-0.62	o	o	o	-0.32+
Psychological Qualities	o	o	o	-0.65	o
Friend to Object Role	-0.82	o	o	-0.40	-0.41
Friend to Other Role	-0.36+	o	o	o	o
Classmate Role	o	o	o	-0.44+	-0.35+
Stranger Role	o	o	o	-0.62	-0.46+
Inappropriate Role	o	o	o	-0.41+	-0.32+
Total Non Causal	-0.61+	o	o	o	o
% of grouped cases currently classified	62	58	54	64	54

Note.: All discriminant function coefficients reported are based on Wilk's lambda. The (o) indicates that the discriminant coefficient was insignificant at the level of p .01. The (+) indicates that the result was based on the responses of less than 10% of both groups.

	0.14	-	0.13	0.24	.12
	0.30	-	0.14	0.03	0.06
Total Situation	°	-	°		0.51
Total Personal Qualities	°		°	.80	0.43
Total Role	°	-	°	1.04	1.12
Total Non-Causal	°	-	°	°	°
% of Grouped Cases Currently Classified	50	0	57	61	54

Note. All discriminant function coefficients reported are based on Wilk's Lambda. The (°) indicates that the discriminative coefficient was insignificant at the level of p .01. The (-) indicates that no computation was performed due to an insignificant F-level.

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